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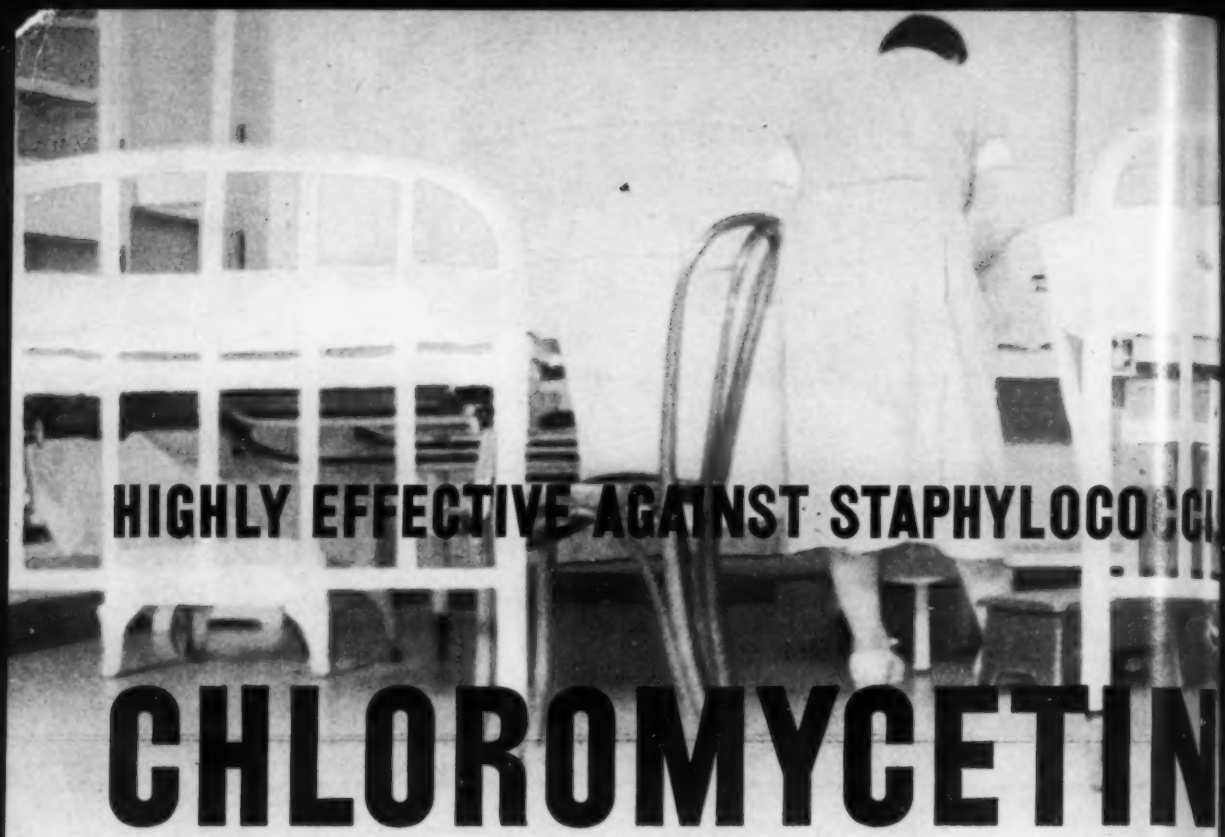

HIGHLY EFFECTIVE AGAINST STAPHYLOCOCCI

CHLOROMYCETIN

Reports on studies of *in vitro* activity of CHLOROMYCETIN over the past few years indicate that this antibiotic has maintained its effectiveness against most strains of staphylococci.[1-4] "...Staphylococci do not acquire resistance to chloramphenicol [CHLOROMYCETIN] as they do to other antibiotics, in spite of heavy use of chloramphenicol [CHLOROMYCETIN]."[1]

These *in vitro* studies are borne out by excellent clinical results with CHLOROMYCETIN in treatment of patients for severe staphylococcal infections, including staphylococcal pneumonia,[5] postoperative wound infections,[6] postoperative parotitis,[7] and puerperal breast abscesses.[8]

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in a variety of forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

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Editorials

Epilogue

There is little to be said concerning the chance the Association had to help Blue Cross-Blue Shield develop a medical care program for the recipients of the Public Welfare Department. The Association's Committee on the problem made no recommendations to the Council. The Chairman simply stated that the Committee saw no need to pursue the matter further unless the Council would approve a service contract. This the Council refused to do in the laissez-faire style characteristic of organized medicine. Concerning a service contract the following was received the next day from Henry Russell, M.D., of Enid.

THE SERVICE CONTRACT

Probably no other question in the economics of medicine today creates such widespread difference of opinion among the doctors as the question of a fixed fee schedule versus the traditional practice of basing fees on the patient's ability to pay. The principal argument for the latter method is based on the doctor's characteristically independent feeling that "no one is going to tell me what to charge the patient for the services I render." In principal this idea is good, but in actual practice it has created some problems that the doctors must face or continue the present decline from their previous lofty perch of high esteem in the public mind.

One of the most serious abuses of which the doctors are guilty concerns the frequent practice of hiking their fees whenever they find that the patient has insurance. As a group, we may deny this vigorously and display our wounded pride, but as individuals the insurance companies can produce all too many obvious examples of this practice for us to ignore. This unhealthy practice creates one of two results, depending on the type of insurance. Firstly, if the patient has an indemnity type policy he ends up paying a much larger "difference" than is fair or justified. Secondly, if he has a service type policy the insurance company ends up paying the maximum fee in practically every case, despite the fact that these maximum fees have been established for unusual or difficult cases. The doctor's usual fee is often lower than the maximum fee granted by the insurance company. Insurance companies pay claims out of income, so what goes out must come in; therefore when claims go up premiums are always going to go up and hospitalization and health insurance is gradually being priced out of the range of the middle income group who need it most.

Proponents of the graduated fee schedule also argue that the fixed fee schedule does not allow for compensation in complicated or difficult cases or for variations in training, skill and experience of the individual doctors. For every difficult or complicated case, there is a simple and easy case of the same type to offset it, and the rule of averages eliminates the need of charging more for the difficult case. However, even in a fixed fee schedule, provisions can be made for the difficult or complicated case if desired, so long as limitations are placed on the number of cases reported by the individual doctor.

The argument that additional skill, training and experience deserve additional compensation is invalid with our present day attitudes in the practice of medicine. In hospitals where physicians are restricted in their practice this problem is taken care of by this restriction. Whenever a doctor is granted the privilege of doing certain procedures in a hospital or whenever he presumes to do any procedure in his office it is assumed by the patient that he can perform this procedure with the skill of any other doctor in the vicinity, or the patient would probably go to another doctor whom he considered to be more skillful. The medical profession cannot point its finger at an individual doctor and say that he is more skillful or less skillful than another, and therefore should receive a higher or lower fee for a particular procedure. Young doctors entering a community to practice rarely begin practice with lower fees despite their relative inexperience. Ultimately the patient

must decide who is going to care for him, and in the patient's mind his doctor is always worthy of as high or higher fee than any other doctor in the community. The members of the medical profession compensate the unusually skillful doctor by referring to him patients they feel they cannot care for adequately. This skillful doctor thereby prospers by an increased volume of patients.

The arguments for a fixed fee schedule are mainly based on two proposals. One: Fees for any service, medical or otherwise should be based on the service rendered rather than on the patient's ability to pay. Two: A fixed fee schedule prevents the "soak the rich" feeling that sometimes develops in patients when an unduly large fee has been charged merely because they have been financially successful.

A fee commensurate with the service rendered is certainly the basis of most American enterprises. The public invariably discovers and resents whenever any group or individual charges more than a service is actually worth. With the development of such aids as the California Relative Value Schedule, it should be fairly easy for the medical profession to place a fair and equitable fee on their services. Although all doctors may not entirely agree with every figure in such a schedule, minor inequities will almost always be balanced by other minor inequities in the opposite direction. For example: an individual doctor might be unusually skillful in performing an operation for hernia and he might feel that the fixed fee schedule would not compensate him adequately for this particular operation. On the other hand this doctor may also do gastric resections with considerable less skill. Even so he still received the same relative fee despite his lack of skill in gastrectomy.

The tradition of increasing fees to patients with higher incomes certainly creates considerable misgivings in the minds of many people. It is interesting that this practice has existed so long in medicine when one considers that doctors as a group are in a higher than average income bracket. Should we not consider several practices that affect our own payments to other people? The most obvious "soak the rich" practice in this country is that legal one perpetrated by the government and known as the Federal Income Tax. This devastating, confiscatory tax, which penalizes a person for increased initiative, intelligence and endeavor is certainly little different than a graduated medical fee schedule that does the same thing. As a group, doctors greatly dislike the Federal Income Tax schedule which penalizes us a higher amount percentage wise the harder we work. By and large the income of persons other than the medical profession is also based on their training, abilities, and willingness to work. Why then, should the medical profession penalize these more energetic people by charging higher fees for the same procedure when we ourselves resent this practice so greatly. This is not a capitalistic practice, but is a socialistic practice with the same basic result of ultimately reducing everyone's savings and income to the same level.

In the purchase of other services and products people often have the privilege of determining the price category which they wish to pay or which they can afford to pay. The quality of the product or the quality and quantity of the services can legitimately vary, based on the price. However, this is not true in medicine. Every doctor is morally and ethically obligated to render this best service to the patient regardless of the patient's ability to pay. Since the service rendered is therefore always of the same quality for every individual doctor there should be a fixed maximum fee for this service. For the relatively few people who cannot actually afford to pay a reasonable fixed maximum fee, then discounts could be given proportional to the patient's need. This is in the highest tradition of medicine as we are all obligated to render service even when no compensation will be available. Since most of these extremely poor patients are now being cared for through various social agencies of the government and since approximately 65% of the American people are now partly or completely covered by private insurance or by Blue Shield-Blue Cross, doctors income would suffer very little through any reduction in the fixed maximum fee.—*Henry Russell, M.D.*

Is Boxing Immoral?

Doctor Eugene G. LeForet in the *Linacre Quarterly* discusses the sport of boxing from a medical and moral aspect. He is inclined to believe that "boxing as a sport, because it has for its prime and direct object the physical injury of the contestants would therefore differ intrinsicly from all other forms of athletic endeavor and should demean more than casual scrutiny by the medical profession."

The medical profession well knows that injuries which produce transient and even permanent disability are not uncommon to the sport of boxing; injury to the brain, the eye, the kidney are the usual sites of traumatic effect. And the punch drunk boxer who ends his days in a semi-vegative existence is a notable example of the sad harm which may be produced by subjecting man's most glorious and precious possession—his brain—to the destructive effects of repeated blows to the head. Even death is not unusual. But although death may result from boxing accidents it may be of interest that according to statistics boxing stands only third in the number of deaths produced—baseball is first. Yet, as Doctor LaForet explains, the difference is that in baseball the injury sustained is secondary and incidental to the sport, while in boxing the primary objective of the contest is to produce physical injury.

It seems strange, almost paradoxical, that a profession which is based exclusively on the tradition of compassionate concern for one's fellow man and trains them to have respect and consideration to almost a reverence for the living tissues of which human beings are composed would see justification in boxing. It would appear that a sport which by its very nature negates the humanistic principles on which the profession of medicine is founded would almost outrage the professional sensibilities of any thinking physician.

Boxing may or may not be immoral. That probably depends upon one's own definition and standard of morality. However, it would seem logical to assume that to a physician aware of the significance and meaning of his profession it would at least be a sport aesthetically objectionable. —*D.W.B.*

Diabetes Detection and Education

Each year the American Diabetes Association promotes Diabetes Detection and Education Week, this year designated November 16 to 22, 1958. Much literature will be distributed and many testing units will be set up throughout the United States.

12,104 tests were made in the Oklahoma County School system last year and of these, 14 proven cases or one out of 864, were discovered. These 14 previously had not known they had diabetes. Each was referred to his family physician and should now be under satisfactory control.

What is the Diabetes Detection Drive? It is a year round effort to find our unknown diabetics and guide them to medical care. The Drive is sponsored by the American Diabetes Association, which was founded by and is composed of physicians. The Association works through 42 local Affiliate Associations and through nearly 900 Committees on Diabetes organized within State and County Medical Societies.

The year-round effort is featured by an annual, nationwide Diabetes Week, during which as many persons as possible are screened for diabetes.

Why is it important to me as a practicing physician to cooperate in the Diabetes Detection program?

Helping to detect diabetes is one way of giving better medical care to more people. Out of every 160 patients that come to a physician's office, one may be an unknown diabetic. The physician who wants to improve the care of his patients will want to detect diabetes as early as possible in the people for whom he is medically responsible.

Have you permitted patients to come into your office and omitted a urine test occasionally, at least once a year?

I have. Why? Too busy, have not been reminded about diabetes, or why?

It is hoped that this notice and DIABETES WEEK will be a reminder to all of us to be more alert in the detection and proper control of diabetes.

—*Hugh Jeter, M.D.*

Scientific Articles

DISEASES *of the* SMALL INTESTINE

PHILIP W. BROWN, M.D.

*Mayo Clinic and Mayo Foundation**

Diseases of the small intestine are chiefly inflammatory processes; a smaller group consists of various tumors.

Viral Enterocolitis

Of inflammatory diseases of the small intestine, the most common is viral enterocolitis or so-called stomach and intestinal flu. We know that this is a disease caused by a virus, probably carried in food and water, and passed along from one person to another. Although viral enterocolitis usually is short lived, the patient can be miserable and distressed for 12 to 48 hours. Most frequently all that is necessary is to keep the patient quiet, administer sufficient codeine or paregoric to control the symptoms, and allow him such fluids and simple foods as he may wish to ingest. In an occasional case in which the infection is more devastating and is accompanied by considerable prostration and fever, it may be necessary to administer fluids intravenously and to employ larger doses of a narcotic agent, such as one grain of codeine given hypodermically or 1/6 to 1/4 grain of morphine. After such an attack it is not uncommon for the victim to experience some degree of cramping and abdominal misery for several days. In such instances the stools should be examined and proctoscopic and roentgenologic examinations should be done so that it can be certain that there is no organic disease which is becoming manifest. If results of these studies are negative, the patient can be advised positively that irritability of the bowel is not uncommon after gastric distress of this nature, and that it will subside. I urge the patient to eat and drink what he knows, from his own experience, will be satisfactory to him and perhaps supplement the food and drink with a simple sedative agent such as 1/2 grain of phenobarbital taken two or four times daily. Another helpful agent is a 10-mg. spansule of proclorperazine (compazine) taken once or twice per 24 hours.

THE AUTHOR

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Certified by the American Board of Internal Medicine, Doctor Brown's practice is limited to his specialty, gastroenterology. He is a member of the American College of Physicians, the American Gastroenterological Association, the Minnesota Society of Internal Medicine and the Sigma Xi.

This paper was presented at Fourth Annual Southeastern Oklahoma Clinical Symposium August 9-10, 1958.

Regional Enteritis

Of the chronic inflammatory diseases which we see, regional enteritis[1] is more frequently encountered than others. Nonetheless, regional enteritis is a rarity, because we see only about one instance of it to 10 instances of ulcerative colitis. Tuberculosis of the small bowel used to be the most common acute and chronic infection, but the incidence of this disease has subsided with the decline in human and bovine tuberculosis.

The acute phase of regional enteritis is not often proved unless the abdomen is surgically explored on the basis of a preoperative diagnosis of a ruptured appendix, ulcer or the like. At such a time the small bowel presents a diffuse, red, thickened and angry appearance which may extend from a few to many centimeters in length. In the great

*The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

majority of such cases the process will subside, especially if incidental surgery is not done, such as appendectomy.

Regional enteritis is a curious disease of unknown origin. It is a nonspecific granulomatous process which may involve any segment of the small intestine and may regress into the stomach or proceed all the way down the bowel to the anus. In the acute phase it is characterized by necrotizing, ulcerating inflammatory changes, and in the chronic phase by cicatrizing inflammatory changes. In 90 per cent of patients the lower or terminal portion of the ileum is involved. External fistulas develop in about 20 per cent of these patients and are usually the aftermath of a previous exploratory procedure. Internal fistulas between loops of the intestine are present in more than 50 per cent of patients. In about seven or eight per cent the fistulas are both internal and external.

A helpful clue may be afforded by the fact that about 20 per cent of patients with regional enteritis have an anal fistula. Hence, when a patient who has a simple anal fistula is more depleted and ill than would be warranted by the presence of such a lesion, the possibility of regional enteritis should be kept in mind.

Regional enteritis is chiefly a disease of young people. It has been found in patients as young as four years, but it can develop in patients beyond the age of 70 years. However, more than half of the patients who have regional enteritis are between the ages of 16 and 30 years.

The two main manifestations of this disease are well known. First, if much ulceration and inflammation are present, diarrhea, fever and cramping will be prominent. Second, if there is more hyperplasia with features of obstruction, the patient will have cramps and pain with less diarrhea and less evidence of inflammatory reaction or fever.

Medical management has not been too satisfactory. Nonspecific measures, such as physical and mental rest, the administration of blood, use of a high-protein diet with a low residue, and vitamin supplements and sulfonamide compounds, especially those of low solubility, such as azulfidine, may be used. However, none of these measures has been of more than temporizing value, in my experience. Much enthusiasm has been displayed in some areas for the use of steroids. We tried steroid compounds for a considerable time. In a number of instances the steroids do seem to provide some benefit; in other cases rather unhappy complications, both psychic and structural, have arisen. Although we are not averse to using one of the steroids for a brief period, we feel that continued use of these hormones is certainly not the answer to the problem. Continued use introduces the serious risk of dependency on the drug as well as the known complications.

Surgical procedures for regional enteritis have been disappointing for those patients who have more of the inflammatory component of the disease or have extensive involvement of the bowel. When the hyperplastic, obstructing phase is dominant, removal of the segment of intestine thus affected offers a good prognosis. It is remarkable how much of the small intestine can be removed, with the patient still maintaining good nutrition. At times, removal of as little as a few inches of the ileocecal coil may result in profound intestinal dysfunction and malnutrition, whereas at other times good nutrition and health may be maintained when only two or three feet or even less of the small bowel remains. I cannot explain this paradox.

Results of operation in this select group of patients have been excellent: at least 80 per cent or more are benefited. Whether the exclusion operation with ileocolostomy should be done or resection of the involved portion of bowel plus ileocolostomy should be carried out is a question I do not propose to settle. I simply comment that if conditions are such that the risk is warranted, resection of the diseased loop of bowel is advisable.

We have tried roentgen-ray treatment for several years, particularly when the disease has been extensive and has been associated with predominance of the inflammatory component. Roentgen-ray treatment has

been administered to more than 150 of our patients, with encouraging results for probably 20 per cent. In some instances the treatment not only has been of no value, but has been followed by a rather sharp flare-up of diarrhea and hemorrhage. Roentgen-ray therapy is worth a careful trial when serious and extensive involvement of the bowel is at hand. We have had a few patients in whom healing progressed to such a degree that stricture resulted. Stricture required operation; when the involved portion of bowel was removed, the patient continued in excellent health.

Diverticula of the Small Intestine

Diverticula of the small intestine formerly were regarded mostly as anatomic curiosities. It is well known that diverticula can occur anywhere in the gastrointestinal tract, from the throat to the anus. It used to be thought that diverticula in the small intestine rarely caused symptoms. It was realized, of course, that inflammation and hemorrhage or perforation could arise in a diverticulum, but such events were most infrequent. It was also assumed that because the intestinal flow through the small intestine is so rapid, the very speed of the transit constituted a reason why these diverticula did not become seriously involved by disease.

Recently, however, some very interesting problems of malabsorption, with or without steatorrhea, and often associated with macrocytic anemia, have been encountered and they seem to be due to infection in diverticula of the small bowel.[2] For some years it has been noticed that in a number of instances steatorrhea is associated with macrocytic anemia. Investigators have not been too certain whether diverticula scattered through the small bowel might or might not be a factor in such an association or whether diverticula are simply coincidental. It has been demonstrated recently that in some instances macrocytic anemia and evidences of malabsorption with diarrhea and steatorrhea have been corrected by either removal of the segment of the bowel containing diverticula or by the giving of a course of tetracycline for several days to control the infection. It is thought that the antibiotic agent decreases the infection in these pockets and permits the absorption of the essential B_{12} factor. Proof that this could happen was found by the use of radioactive vitamin B_{12} in studies of absorption in which it was possible to demonstrate normal absorption of B_{12} tagged with radioactive cobalt when the patient with macrocytic anemia had received preliminary doses of tetracycline. When the use of tetracycline ceased, it was not long before the anemic phase recurred and absorption of B_{12} did not take place.

I mention the foregoing because the condition in question does occur, even though it is rare. It is prudent to keep in mind these most interesting and curious problems of infected diverticula complicated by macrocytic anemia. Conversely, the sprue-like syndrome or macrocytic anemia should not be ascribed too hastily to the presence of diverticula in the small bowel. Perhaps the issue could be settled by administering the antibiotic and observing the response to it for a few days.

Solitary Ileal Ulcer

Another curious lesion of the small bowel is the solitary ulcer, which is found most often in the ileum. Not many cases of this lesion have been reported. When a patient has had abdominal distress with or without hemorrhage, a solitary ileal ulcer ought to be considered. A surgeon may encounter solitary ileal ulcer when he explores patients who have obscure abdominal symptoms. The ulcer is found chiefly in men. It is cured by removal of the diseased segment of ileum. I have wondered if heterotopic tissue could be the basis for these ulcers, but none has been found. If such tissue actually had been present once, I presume that infection subsequently progressed to a point at which the original area was destroyed.

Meckel's diverticulum, with or without inflammatory changes, is well known, and I shall not review it.

Sprue

Without becoming involved in a discussion of sprue and other varieties of steator-

rhea, I merely wish to mention the rather amazing and encouraging response of this disease in some cases to a gluten-free diet.[3] On the basis of the very definite clinical and objective improvement which ensues after use of this diet, it might be speculated whether sprue is a manifestation of allergy or of some similar type of tissue reaction. It may seem simple to omit wheat from the diet, but actually it is a dietetic chore. Rye and also oatmeal contain some gluten and may need to be excluded. We have seen remarkable and really striking improvement follow use of the gluten-free diet. Prior to this diet, there was no measure of much value for the patients with nontropical sprue we have seen. Since 1930 our resources and skill often proved all too futile in more than 400 cases of nontropical sprue. Improvement may take place only after three to six weeks of use of the gluten-free diet, and relapse is prompt if gluten is reintroduced into the diet.

Benign Tumors of the Small Bowel

I merely wish to summarize various tumors of the small intestine, so that they may be kept in mind for possible reference when the occasion arises. I shall list them in order of relative frequency. Probably the most common benign tumor is the adenoma, which comprises at least a third of all benign tumors of the small bowel. A very interesting manifestation has been noticed in respect to this group of tumors. That is, some patients with adenomas of the small bowel have associated melanin spots on the oral mucosa. These spots may be situated along the lips or on the buccal surface of the cheeks, and the condition which they reflect is referred to as the "Peutz-Jeghers syndrome."[4] It is not related to familial adenomatosis of the colon. However, the state is thought to be a simple mendelian dominant character which will go through families. Although the lips and the buccal mucosa are the most common sites of these curious pigmented areas, the pigmentation also may be found on the extremities. In the latter locations the pigmentation cannot be looked upon as too significant. The adenomas are true benign tumors, and carcinoma as a complication of the Peutz-Jeghers syndrome is indeed rare. The symptoms are those of the mechanical effects of a tumor, or hemorrhage, or intussusception or obstruction. The important factor to remember is that these curious freckles or pigmentation on the lips or cheeks should suggest the possibility of these curious intestinal tumors.

Leiomyoma is the next most common type of benign tumor of the small bowel. Leiomyomas arise from muscular coats of the bowel, and develop chiefly in the jejunum, next to the doudenum and last in the ileum. They seem to grow to a point at which they undergo central necrosis, which impairs their blood supply. This results in degeneration with hemorrhage, which is the striking feature of a leiomyoma.

Other tumors are fibroma, lipoma, hemangioma, neurofibroma, pancreatic rests and various forms of cysts. Another is the endometrioma, which is rare. Clinically, it is beyond any usual means to identify one lesion of the small bowel from another. About the best the physician can do is to sense, by well-developed clinical suspicion, that there is an obstruction in the intestine or hemorrhage caused by some lesion in the small intestine. Unless there are some changes caused by obstruction, even though the changes need not be extreme, the radiologist is not too much help to us because the barium flows through too rapidly to permit adequate detection.

It is most important that we, and particularly those who do surgery, remember the error that can be perpetrated by interpreting a tumor mass of the small bowel as being malignant when the nature of the lesion has not been proved by biopsy. I cannot stress this warning too much.

Malignant Tumors of the Small Intestine

About two or three per cent of all of the malignant tumors of the gastrointestinal tract develop in the small intestine. Carcinoma actually is the most frequent malignant tumor of the small bowel. Sometimes the statement that sarcoma is more common than carcinoma in the small intestine is confusing. Actually the statement is not quite true

and it needs to be modified. The fact is that sarcoma is found in the small intestine more frequently that in the stomach or colon, but carcinoma still occurs more often than sarcoma. Whether the lesion is sarcoma or carcinoma, the chief symptoms are those of obstruction, which causes decrease in the intake of food, with loss of weight and anemia. Unfortunately, these cancers progress to a point at which they are inoperable before symptoms are sufficient to call attention to the situation.

Carcinoids

A most interesting discussion within the past two years has concerned carcinoids of the intestinal tract. Some carcinoids, but not all of them, have the curious function of producing a substance known as "serotonin." These small orange-yellowish tumors may occur any place in the gastrointestinal tract. They have been found in the ovary and occasionally in the lung, but most of them develop in the gastrointestinal tract. More than 90 per cent of them are situated in the appendix, and the other 10 per cent are distributed throughout other areas.[5] Of 565 extra-appendiceal carcinoids, nearly 500 occurred in the ileum. They also were present in the rectum, the stomach, the duodenum and so on. Metastasis is associated with a carcinoid tumor; at the time the patient is seen the degree of metastasis may vary from a high incidence of 75 per cent for carcinoids of the small intestine to 25 per cent for gastric carcinoids. The curious phenomenon arising from the production of serotonin was noted by Biörck and co-workers[4] in 1952 after they had seen flushing, asthma, diarrhea and pulmonary stenosis in a patient who had a carcinoid with metastasis. Without going into details of the studies which led to the identification of serotonin, we can say that the presence of serotonin can be ascertained by examination of the urine. Serotonin, or 5-hydroxytryptamine, is eliminated in the urine as 5-hydroxyindolacetic acid. It can be determined by a fairly simple test of a 24-hour specimen of urine. It must be remembered that not all carcinoids, even when metastasized, will produce serotonin. The clue that a carcinoid is present may rest on the recognition and awareness of the fact that a patient experiences flushing not otherwise explained. If such flushing occurs in women, it is likely to be ascribed to hot flashes.

Comment

Of course, the problem involved in all tumors of the small intestine, whether they are malignant or benign, is the question of removal. The lesions should be removed whenever possible. If the more positive signs of anemia, with or without obstruction, are present, the situation becomes less of a puzzle. On many other occasions the suspicion will arise that the difficulty is functional, and hence the diagnosis may be made of symptoms of an irritable bowel or neurosis of the gastrointestinal tract. I know of no way to avoid this error. On the one hand, the clinician must be constantly aware of the bizarre events that can take place in the small intestine; on the other, he must not be too quick to make a positive decision. Often it will be necessary to ask the patient to report for additional investigation from time to time. Yet the clinician must not become so impressed by the laboratory studies or the findings of the roentgenologist that he ceases to weigh the whole problem and neglects to arrive at the final decision himself. A continual reminder of the importance of the history and the physical findings as correlated with the various studies is a good thing. It is all too easy to dismiss the problem as "functional" when the "results of tests are negative." Indeed, the danger inherent in an alarmist attitude and the danger in too-ready assurance of the patient that "all is well" are equally real.

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DISEASES *of the* LARGE INTESTINE

PHILIP W. BROWN, M.D.

*Mayo Clinic and Mayo Foundation**

In considering problems involved in diseases of the large intestine, I propose to discuss phases of functional conditions and then to consider the more common organic diseases such as ulcerative colitis, diverticulitis, malignant tumors and acute infections such as amebiasis and bacillary dysentery.

Functional Disorders

As is true of most any system of the body, patients who have functional disorders of the intestine outweigh those with organic disorders. My colleague, Doctor E. G. Wakefield, has said, "A distinguishing feature of a functional disorder is its inorderly inception and its progress to an unpredictable conclusion."[1] A functional disorder is a physiologic disturbance and is not the result of any primary intoxication or deficiency state according to present knowledge. It may mimic or imitate any known disease of the digestive system. However, the symptoms of functional disorders are not associated with fever, leukocytosis or any physical abnormality that can be found on examination. Likewise, the usual studies, such as a proctoscopic examination and a barium enema of the colon, will establish the absence of disease. These disturbances of function usually are expressions of tension and stress associated with living conditions, work and the type of eating. A large group of people have colonic irritability as an aftermath of acute intercurrent viral enterocolitis. While most people recover from such episodes of enteritis in two to four days, an appreciable number may have trouble for weeks or even months. Their trouble usually is worse if they receive treatment on the presumption that they might have actual changes in the intestine, such as enteritis or colitis. By the same token, one must, of course, be sure that such changes are not present. However, I wish to stress the fact that these "irritable bowel" affairs with cramping and loose stools are extremely common, but an actual disease process is not demonstrable.

A troublesome term that has bothered physicians through the years is "mucous colitis," which of course is not a true colitis; it is merely the excessive secretion of mucus expelled from the intestine by these nervous people. The trouble comes not from passing mucus, which is on the same basis as an increase in perspiration or in pulse rate when under tension, but from the emphasis that is laid on the fact that passage of mucus is due to colitis. This is a gross error that, in itself, breeds thoughts and fears of serious trouble.

The management and treatment of functional disorders of the intestine, as with other functional problems, are largely a matter of the patient's endeavoring to get his mind and emotions into better order. Probably the least important factor is diet, be it food or beverage, and I advise the patients that their diet is up to them. Sedation, such as with phenobarbital or prochlorperazine (compazine), is wise. The main thing is the assurance that disease is not present. One usually accomplishes a good deal with these functional problems, but some patients have a fixation or obses-

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sion neurosis that is really a psychotic state. In such instances, one is at a loss to be of much help.

Chronic Ulcerative Colitis

Chronic ulcerative colitis fortunately is not a common disease. Yet internists, especially those concerned with gastroenterology, encounter an appreciable number of patients each year who have chronic ulcerative colitis. At the Mayo Clinic, my associates and I see in the neighborhood of 500 to 600 patients each year with this disease. These are not all new patients; many of them come for return visits and checkups. Chronic ulcerative colitis remains a disease of unknown cause. It is frequently the aftermath of some acute infection, which usually involves the gastrointestinal tract but which may be respiratory in nature. It also appears to occur with emotional upsets, and this has led to the enthusiastic and incorrect opinion that ulcerative colitis is chiefly a psychosomatic disease, which it is not. In other cases, the onset may be insidious and characterized by the passage of bloody mucus, intestinal irritability and unrest and, not uncommonly, a recent history of hemorrhoidectomy with no benefit. However, more careful study reveals that the patient has an ulcerative process of the rectum, which may extend into the sigmoid or even farther.

Ulcerative colitis develops most commonly in patients from 20 to 40 years of age, and some 60 per cent of the cases occur in this age group. However, four per cent of patients who have ulcerative colitis are less than 10 years of age, whereas two per cent of the patients do not experience symptoms until they are more than 60 years old. In the latter group, the fear that the patient may have cancer is often present.

Until such time as the presently unknown etiologic factor can be identified, and until physicians learn why some patients have this disease and some do not, the treatment must remain on a nonspecific and symptomatic basis. It is most important to have studies of the stool to rule out the possibility of amebiasis, bacillary dysentery or infection with some less common agent. Likewise, sigmoidoscopic studies and a barium enema of the colon are essential before one can consider that a proper examination of the colon has been accomplished.

In the over-all management of these patients, one must deal first with the basic principles of trying to obtain quiet and peace. I use the phrase "peace and protein," the first word of which emphasizes the necessity for these patients to live at a more gentle and restful pace than they otherwise would like to live. Most patients who have ulcerative colitis are high-geared and of a higher level of intelligence than the average. In the acute phases, rest in bed under as pleasant conditions as possible is important. Beyond this, there is no reason why the patients should not be up and around. People with this disease are better out of the hospital than in it, if their condition permits. These patients also should have a nourishing, high-protein diet. It is more important to get these people to eat than to be too fussy or particular about a little seasoning or spices or whether food is fried. It is amazing how people become enamored with the idea that condiments, such at ketchup or mustard, or fried foods are simply lethal. It is true that these things may not agree with them; if so, they should not eat them. However, it is well to remember that two of the commonly used foods for invalids, namely milk and citrus fruits, cause most of the reactions resulting from food sensitivity. Vitamins have their value only in the sense that they may supplement deficiency of eating. I thoroughly approve of using vitamins, but they must not be looked on as food.

Sedation, particularly in the tense, nervous, frightened patient, is most important; as already noted, phenobarbital or compazine taken two to four times a day is often helpful.

When a patient has a great amount of cramping and diarrhea, codine and paregoric used judiciously are of help. There is the fear of addiction, but such is most unusual in these patients. If the patient is anemic, blood transfusions are of great value. Not only do they replace lost blood

and restore normal blood volume but they apparently add something to improve the resistance of the patients.

In the acute phases of ulcerative colitis, there may be a definite need for some of the antibiotics, such as penicillin, streptomycin or the broad-spectrum antibiotics of the tetracycline group. Any of these drugs in themselves may tend to cause diarrhea if used too long, and these agents are employed only when acute manifestations are present that might be attributed to impending perforation. For the more chronic phases of the disease, an ideal drug is still not available. However, a chemically combined preparation of salicylate and sulfapyridine known as salicylazosulfapyridine (azulfidine) helps control symptoms in many patients who have ulcerative colitis. This drug is used in intermittent courses, such as taking it for five to 10 days at a time with rest intervals of five to 10 days. Sometimes it is given for seven to 10 days each month. A few patients will do much better to take two to five tablets daily for relatively long periods. This drug apparently controls the diarrhea and cramping, although I have not the slightest idea as to how it works. Measurable levels of the drug are not present in the blood or urine, and cultures of the stools show no change. Only rarely does one find a patient who is sensitive to this sulfa drug.

It has been almost inevitable that steroid hormones should be tried in the treatment of ulcerative colitis. Experience at the clinic dates from 1951, when my colleagues and I noted improvement in the complications, such as iritis and arthritis, as a result of such therapy. However, we were disappointed that little or no change occurred in the colitis itself. As time has passed, our enthusiasm for either oral or hypodermic use of these hormones has waned. The steriods are not curative, although they sometimes may be effective therapeutic adjuncts. Whether it is wise to use them only for a short period or for a prolonged one is not agreed. I prefer the short-term use of the hormones, being fearful of side effects as well as the establishment of a dependency for the drug.

At the meeting of the World Congress of Gastroenterology in Washington, D. C., in May, 1958, two papers were presented on the use of rectal instillation of hydrocortisone succinate; one paper was by Truelove,[2] of Oxford, England, and the other was by McGivney and Patterson,[3] of Galveston, Texas. These men advocated nightly retention enemas of 100 ml. of an isotonic solution of sodium chloride containing 100 mg. of hydrocortisone. The patient is urged to retain this solution as long as possible. We have found that ½ or 1 grain of codeine, orally administered 30 minutes before the instillation, appears to favor longer retention of the hormone. Favorable results, both subjective and objective, have been reported. We are trying this method, but more time must elapse before a decision is possible as to its effectiveness. One must continue to try new measures and yet not do bizarre or foolish things. Many substances have been tried for rectal instillations and to no avail; maybe this one will prove otherwise.

A brief consideration of the surgical aspects of ulcerative colitis is indicated. Complications, such as secondary polyposis, colonic stricture, perforation, extensive perirectal infection and carcinoma, demand surgical intervention. Carcinoma is likely to develop in people who have had the disease for 15 years or more, and this is one of the reasons why patients with ulcerative colitis must have annual proctoscopic and colonic examinations.

It is possible that 10 or 12 per cent of patients who have ulcerative colitis may require ileostomy and colectomy. I shall not discuss the merits of whether or not one may conserve the terminal portion of the colon with the hope of doing subtotal colectomy and then an ileorectosigmoidal anastomosis, although I doubt that this can be accomplished successfully in any but the rarest case. Surgical procedures should not be postponed indefinitely; on the other hand, they should not be entered into hurriedly. A good many people with ulcerative colitis can be carried along nicely and live efficient lives. In an appreciable number of patients, the disease actually appears to subside entirely. I hesitate to use the word "cured", however, for practical purposes, many pa-

tients who have ulcerative colitis may become well.

Diverticula of the Colon

Diverticula of the gastrointestinal tract are common. True diverticula are congenital and involve all coats of the intestinal tube. These are much less common than are the acquired lesions. They are found with increasing frequency among patients who are past 40 years of age and occur predominantly in the lower left portion of the colon. At least 10 per cent of people more than 40 years of age and probably 25 to 30 per cent of people more than 50 years old have diverticula of the colon.[1] The sacs, or pouches, are really herniations of the intestinal mucosa and submucosa through weakened portions of the intestinal wall, usually at the site of the entrance of blood vessels. They are commoner in men than in women in a ratio of 1.6:1 and also are more common in obese people.

A series of 47,000 consecutive barium enemas at the clinic showed 4,000 people of all ages to have diverticula; 600 had evidence of diverticulitis, of whom 144 required operation. In one sense this would suggest that 144 of 4,000 people having diverticula (3.6 per cent) will require operation. This figure, while still high, is probably a fair indication of the relative infrequency of patients requiring operation for diverticula of the colon. The other figure of 600 people who had diverticulitis of the colon, and of whom 144 required operation, is not a true reflection of the over-all incidence of diverticulitis. Certainly, one-fourth of the patients having diverticulitis do not require operation. Actually, only about 10 per cent of a large group of patients having diverticulitis underwent surgical procedures.

Diverticulosis itself produces no symptoms. However, if inflammation ensues, then symptoms do occur; these include pain, fever and signs of obstruction in two-thirds of cases and signs of inflammation in one-third. Bleeding from the intestine rarely should be considered as a symptom of diverticulitis; while it may and does occur, it is most uncommon. Fistulas, either through the abdominal wall or into adjacent viscera, developed in 42 per cent of the surgical group. Urinary voiding of gas is prima-facie proof of a fistula into the bladder.

The medical management of diverticulosis, although minimal, is wise from a prophylactic standpoint. These patients should avoid eating hard particles, sometimes called "cinders," such as nuts, popcorn and big seeds, as in grapes and large berries. Also, it is wise for these patients to take one or two drams of mineral oil at night two or three times a week.

The treatment for diverticulitis includes rest in bed, the application of heat to the abdomen, gentle rectal irrigations of warm saline solution, a liquid diet (or perhaps only fluids given intravenously for a day or so) and antibiotics. As the attack subsides, a low-residue diet is provided first, followed by resumption of a normal diet. Mineral oil is given orally at bedtime. The use of antibiotics is discontinued as soon as possible. When fever and tenderness have subsided, the patient may be allowed out of bed. The tendency is to let the patient up too soon. For aftercare, the same simple suggestions should be followed as for patients having diverticulosis, namely no "cinders" in the diet and the use of mineral oil at night. Many patients, amazingly enough, do not suffer from further acute attacks.

The more unfortunate patient whose attack is complicated by perforation or increasing obstruction must undergo operation at what appears to be the most favorable time. If a patient suffers from recurring bouts of infection with periods of disability, operation is advisable. One never should hesitate to urge operation if roentgenologic examination shows evidence that the region involved has short sharp borders. More often than not, such a picture is indicative of carcinoma and not diverticulitis. In general, if operation is advised, the curative procedure is resection of the affected region. Drainage of an abscess or establishment of a temporary colonic stoma without resection of the involved portion may tide the patient over an emergency, but these measures are rarely curative.

The over-all picture in this problem is good. Fully two-thirds of patients with diverticulitis have little or no further trouble. About one-fourth will have some trouble, but not severe, leaving about 10 per cent who will require surgical measures. This, however, does not apply to patients having diverticulosis. There is no longer the reluctance to advise operation now that splendid measures to control infection are available. While a few patients may need a two-stage operation, many patients can be taken care of with a one-stage procedure. This is a great change from preantibiotic days, when a surgical procedure usually was measured in stages over weeks and months and was accompanied by an appreciably high mortality rate.

Malignant Tumors of the Colon

At least 95 per cent of malignant tumors of the colon are adenocarcinomas. We must continue to stress that carcinomas usually arise at the site where polyps occur. An adenomatous polyp of the colon is, for practical purposes, the seed of carcinoma. This raises the question of whether routine proctoscopic studies and barium enemas should be done on all patients in the course of examination. I am sure there is some merit in this. However, the problem is similar to that of whether to do routine gastric roentgenologic studies for carcinoma. The yield is so small that one wonders if it is warranted. The reported incidence of polyps varies from two per cent to as high as 15 per cent. A study[5] carried out at the clinic on 1,919 patients who did not have any intestinal or rectal symptoms disclosed that 8.1 per cent had intestinal polyps. The majority were in people beyond the age of 40. One may mistake a lipoma or a pancreatic rest or some other lesion for a polyp; despite this possibility, it is safer to remove these polyps than to leave them.

The question of familial polyposis is a separate problem. In such cases, one must remove the colon with the hope that an ileorectosigmoidostomy can be accomplished; the polyps in the terminal segment of the intestine are destroyed later by fulguration. This is possible in most instances. If not subjected to surgical intervention, these patients will die of carcinoma of the colon, barring other diseases or accidents.

Acute Infections

Insofar as acute infections of the colon are concerned, one thinks first of the Shigella and Salmonella groups of bacteria. Both of these groups can produce acute and violent reactions. One of the common causes of food poisoning is an infection with a member of the Salmonella group. When this is recognized, the specific medication appears to be chloramphenicol. The tetracycline group is extremely effective in eradicating Shigella organisms. Sulfadiazine may be used if the antibiotic is not at hand. It apparently does not eradicate the organism as effectively, but it does control the toxicity and the symptoms.

Another frequent cause of food poisoning is staphylococcal infection, in which the poisoning is due largely to the ingestion of staphylococcal toxin that already has been formed in the infected food. Unless there is a huge overdose or some complicating factor, the situation usually remedies itself when the toxin has expended its force. Another form of staphylococcal infection is the presence and overgrowth of staphylococci in the patient's intestinal tract, which produces severe staphylococcal enteritis. It may occur with or without relationship to surgical procedures and also with or without relationship to preceding use of antibiotics, although its occurrence is much more common since the use of antibiotics in either medical or surgical patients. The staphylococci proliferate rapidly and continue generation of the toxin. An associated difficult and dreadful problem is that of trying to protect patients from carriers of these organisms. Many studies have indicated that a third or more of attendants in hospitals carry active staphylococci in their nose and throat. The disease is less common in those patients who are able to maintain a fair intake of food, particularly proteins. The main thing is to be on the alert for such a situation, with the immediate intravenous administration of fluids and electrolytes, associated with use of antibiotics that have

not already been given to the patient, such as neomycin, erythromycin or novobiocin.

The incidence of amebic dysentery is a striking illustration of the level of sanitation and sewage disposal. If human excreta can enter the mouth of a person, diseases such as this will continue. My associates and I are seeing fewer patients with amebiasis than in the past. Most of the cases represent quiescent disease in people from tropical lands or in military personnel from overseas. "Frank" cases of amebic ulcerative colitis and hepatic damage have become extremely uncommon in the past 10 years.

In no wise do I deprecate examination of the stool for Entamoeba histolytica and other intestinal parasites. When E. histolytica is found and subjective symptoms are absent, the simplest and least toxic treatment is the use of carbarsone. This arsenical drug is prescribed in 0.25-gm. doses after meals for five days, with a rest interval of 10 days, followed by another five-day course. The risk of arsenical reaction is extremely small, and yet this amount of the drug is usually sufficient to eradicate the parasites. For cases of active amebiasis, the older method of combining administration of emetine with carbarsone is still excellent. The risk of reactions from emetine is minimal when it is given in one-grain doses hypodermically twice daily for three days, with a second course after a week's interval.

Another method, used preferably if the presence of hepatitis is suspected, is the combination of chloroquine and a tetracycline drug. One prescribes chloroquine in a dose of 0.5 gm. twice daily for seven days. With this, one administers a tetracycline product in a dose of 500 mg. every six hours for two days and then every eight hours for three more days. A rest interval of seven days is advised, and then the same regimen is repeated.

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ABSURDITY, n. A statement or belief manifestly inconsistent with one's own opinion.

From the Devil's Dictionary by Ambrose Bierce

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DISSECTING HEMATOMA *of the* AORTA

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Dissecting hematoma, better known by the term dissecting aneurysm introduced by Laennec over 100 years ago, has stimulated comparatively little interest except as a subject for a clinical pathologic exercise and even then primarily to test the imagination and skill of the clinician who already knows that the patient has died. This attitude is in marked contrast to that with respect to myocardial infarction which historically is a much more recent disease. For dissecting hematoma was first recognized as a pathologic entity by Morganni in 1760; its mechanism first studied by Mauvoir in 1802; and it was first clinically diagnosed by Latham in 1855 long before coronary thrombosis with resultant myocardial infarction was so recognized. This lack of interest in dissecting hematoma may be perhaps due to its apparent rarity, its lack of definitive diagnostic criteria and also perhaps even if the clinical diagnosis was made, to the fact that the physician simply attempted to relieve a pain and to wait for the patient to die.

Actually, the incidence of dissecting hematoma is unknown.[1, 2] It is usually stated that it occurs once in about 400 autopsies in a general hospital. Because death frequently follows, quickly upon the onset of pain, most victims may not reach a hospital. For instance, the incident in the coroner's office has been reported as slightly over one per cent of all sudden death. In our own experience, dissecting hematoma now surpasses cardiovascular syphillis as a cause of death. There is good reason to believe that the incidence of dissecting hematoma is rising and will continue to rise. The hypertensive person who is particularly prone to develop dissecting hematoma is living longer because of prevention or control of many complications, particularly those of infectious origin.

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Anti-hypertensive drugs may also prolong the lives of hypertensive persons. Paradoxically, the intermittent or partly ineffective use of these very drugs may precipitate dissecting hematoma. Thus, nine of 44 hypertensive persons so treated develop dissecting hematoma. This increasing incidence is one important reason for a renewed interest in this disease. Equally important in the renewed interest is the development of a surgical approach[3] which permits the acute lesion to terminate with survival of the patient just as nature may but unfortunately too infrequently. Thus, about one-third of all persons with dissecting hematoma die within 48 hours and one-half within 10 days. This high mortality means that if surgical treatment is to be effective, a definite diagnosis must be established with confidence immediately after the onset of symptoms. It is equally important, of course, not to over diagnose this lesion because of an unnecessary operation for dissecting hema-

toma in a critically ill patient has a high chance of proving fatal.

Unfortunately, the clinical syndromes of dissecting hematomas are extremely variable and frequently confusing. Nevertheless, there are certain suggestive syndromes which make the diagnosis very likely and on rare occasions are almost diagnostic. Dissecting hematoma is most commonly manifested by pain which starts abruptly with its maximum intensity and remains unremitting. The pain may be constant in location or may progress downward or upward following the course of the aorta or upward following those of the major branches of the arch of the aorta. Pain most commonly starts in the precordial interscapular or epigastric region or in the loin.

Such pain, not quickly explainable on any other basis, should lead to a suspicion of dissecting hematoma particularly if the patient 1) has Marfan's syndrome or has a relative with such 2) has coarctation of the aorta 3) has severe funnel shape chest with kyphoscoliosis 4) is pregnant particularly in the third trimester. In pregnancy, pain is typically in the precordium. Perhaps the aorta under the influences of hormonal changes during pregnancy is more susceptible to direct rupture 5) has a pre-existing high blood pressure with the abrupt appearance of an aortic diastolic murmur which usually occurs in about 25 per cent of patients with dissecting hematoma 6) persistent hypertension with cold clammy skin 7) a person whose hypertension has been previously effectively treated by anti-hypertensive drugs, and, last, has a bacteremia.

Even in the absence of these situations, a symptom complex such as that previously described should raise the suggestion of the possibility of dissecting hematoma. The usual difficulties in the diagnosis arises because of the resemblance of the pain to that of myocardial infarction. Frequently, pain of myocardial infarction is different because 1) there may be a history of pre-existing angina pectoris 2) the pain usually reaches its maximum slowly and 3) the pain is remitting 4) the pain tends to radiate transversely, particularly to the shoulders and to one or both arms 5) physical examination in these severe cases which may mimic myocardial infarction discloses a rapid rate, accentuated second pulmonic sound and a gallop rhythm with or without arrhythmias. In these situations, an electrocardiogram is frequently positive almost immediately after the onset of pain. Unfortunately, this is not always so nor does the transaminase help one immediately. Roentgenologic examination of the chest is also of little help at the onset except on rare occasions in which a previous film is available from which it differs.

Even in the subacute or chronic stage of dissecting hematoma, conventional roentgenologic examination of the chest may not be diagnostic. The double contour aortic knob[4] may be mimicked by an atherosclerotic partly uncoiled aorta which is so common in hypertension and the age group most susceptible to dissection of the aorta. Unexplained left pleural effusion should heighten one's suspicion of the possibility of a rupture of the aorta with or without healing of the dissection.

Pain almost identical with that of dissection may be due to pericarditis. But this lesion almost invariably produces in its acute stage a friction rub which can be heard if the patient is examined frequently the first day of his illness and particularly if examined supine, sitting and leaning.

The diagnosis is usually overlooked when dissecting hematoma produces pain in an atypical region and when pain is absent because of unconsciousness or syncope. Such complications occur when the dissection of the branches of the aorta which lead to the brain just as dissection of branches of the abdominal aorta may produce pain in the loin resembling renal disease or epigastric pain resembling peptic ulcer.

It is important to know that pain which radiates from the torso to the head, neck, back or extremities is due to dissection of

branches of the aorta. This dissection produces abnormalities and inequalities of the pulses and also may produce transient neurologic symptoms and signs. Such findings are rarely present with the other types of pain producing syndromes with which dissecting hematoma may be confused.

A small percentage of hematomas may heal spontaneously. Patients with healed dissecting hematomas may have no symptoms or may have heart failure with or without pleural effusion. In these cases, conventional roentgenology may be helpful but, as previously stated, is rarely diagnostic. The presence of aortic regurgitation not explainable on either a syphilitic, atherosclerotic or rheumatic basis with an unexplained left pleural effusion or cardiac failure adds to the likelihood of the diagnosis.

Careful attention to all these features will lead to a higher incidence of correct diagnoses of dissecting hematoma than is commonly reported in the literature. Nevertheless, it must be admitted that no combination of clinical features is necessarily pathognomonic and that atypical features which shatter confidence are not rare.

Dissection of the aorta is characterized by extravasation of blood in the wall of the aorta.[2] Regardless of whether the blood has reached extravascular aortic tissue from a tear in the intima or a rupture of the vasa vasorum, it is obvious that contrast substance which enters the aorta will also reach this tissue.[5] Venous angiocardiography[6] is one method of delivering contrast substance into the aorta. The only problem is whether it is safe to perform such a study in the acute stage of dissection. Our group had previously carried out several hundred such studies in a variety of cardiac illnesses including advanced cardiac failure. We have never encountered a significant untoward cardiac or aortic reaction. For these reasons, we have no hesitation in performing venous angiocardiography in persons suspected of suffering from acute dissecting hematoma. The studies, as anticipated, proved harmless and diagnostic.

The diagnosis is established by visualizing densely opacified blood within the aortic lumen and less opacified blood within the aortic wall. These two regions are separated by a zone of radio lucency which represents the thickness of the wall lying between the dissecting hematoma and the aortic lumen. The extent, origin and termination and the dissection is visualized which is of great help to the surgeon planning the operation. Although simultaneous biplane venous angiocardiography is desirable, the lateral projection is usually adequate in delineating the disease.

Summary

Dissecting hematomas of the aorta is increasing in frequency. The clinical syndromes are outlined. Nevertheless, a definitive clinical picture is not always present. A diagnosis established promptly and with confidence is necessary for surgical repair to be effective. This can be accomplished safely by venous angiocardiography.

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Evaluation of 100 Partial Gastric Resections *for* Benign Peptic Ulceration *of the Stomach and Duodenum*

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The following report is a review of a consecutive series of 100 cases in which a uniform partial gastric resection was performed. It is proposed to show that an ante colic Billroth II type of resection is a satisfactory procedure for the treatment of benign ulcers, that this resection can be performed in the presence of acute bleeding with good results, and that on occasion such a resection is practical is perforation has occurred.

The information contained herein was obtained by reviewing the history, physical examination, laboratory findings and hospital course as recorded during their stay at St. John's Hospital, Tulsa, Oklahoma. This series represents partial gastric resections for benign peptic ulceration performed over a ten year period by one surgical team.

The following information was obtained for evaluation: sex, age, indications for surgery, type of operation performed, type of anesthetic used, additional operative procedures at time of resection, post-operative stay and complications. A post-operative follow-up consisting of a personal interview with each patient is currently being conducted.

The series represents 80 males and 20 females. Their ages ranged from 28 to 81 years.

Indications for operation were:

Poor response to medical management	46
Obstruction	25
Active bleeding	23
Suspicion of malignancy	4
Acute perforation	2

It is interesting to note that 12 of the patients in this series had had perforation at some time in the past.

The type of operation performed was a Billroth II partial gastric resection, with approximately two-thirds to three-fourths of the stomach being removed. An ante colic anastomosis to the jejunum consisting of the entire gastric stump was performed. No attempt was made to have a short afferent loop, and in general the anastomosis was made 12 to 15 inches distal to the ligament

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This paper was presented by Doctor Compton at the Oklahoma Association of House Staff Physicians on May 23, 1958.

of Trifz. The area of ulceration was removed entirely when feasible, however, in 12 cases exclusion of the ulcer was necessary. The series represents 11 gastric ulcers, and the remainder duodenal ulcers.

Additional procedures were performed in 22 cases, consisting of: appendectomy 12, cholecystectomy six, cholecystoduodenostomy one, operative cholangiogram one, ventral hernia repair one, and cardiac massage one.

A continuous spinal anesthetic was used in 81 cases. A single injection spinal was employed in nine cases, and a general anesthetic was used in 10 cases.

Careful attention was given to post-operative care. Gastric decompression was maintained on the average of four days during which time parenteral fluids were given. Following this, selected liquids and foods in small amounts were given for three to four days. Thereafter the patient was placed on an ambulatory ulcer diet without supplemental anti-spasmotics or anti-acids. The average number of post-operative days that the patient was hospitalized was 14.

There were complications in 20 cases and there were two deaths. The complications consisted of:

Major wound infections	6
Post-operative hemorrhage	3
Minor wound infections	3
Duodenal leak	2
Marginal ulcer	2
Gastric retention	2
Pulmonary emboli	2
Dehiscence	1
Phlebothrombosis	1
Efferent loop obstruction	1
Adhesions	1

There were two deaths. Both had a similar history of protracted pain with long standing partial obstruction, and on admission were completely obstructed. They were in poor electrolyte balance which could only be partially corrected prior to operation. Both expired on the fifth post-operative day in complete renal failure.

Comments

This series shows that a subtotal gastrectomy with the Polya ante colic anastomosis was performed on 23 patients during major active bleeding, 18 of which had had previous severe bleeding.

This group of 23 cases of active bleeding represents two gastric ulcerations and 21 duodenal ulcerations. There were no deaths in this group. There were post-operative complications in three patients.

A subtotal gastric resection was performed on two patients with perforation. In each case the perforated site was of such magnitude as to make primary closure impractical.

Summary

Among the 100 patients with benign peptic ulcer who were subjected to partial gastric resection there were complications in 20 cases. There were two deaths following resection.

A follow-up survey consisting of personal interview and questionnaire is currently being conducted to evaluate patient's satisfaction.

This report is presented as evidence that the Billroth II partial gastric resection is a very satisfactory operation for benign peptic ulceration of the stomach and duodenum. The operation mortality rate is low and the complication rate is low. The excellent results in cases with acute bleeding is quite striking. It is felt that this operation meets the demands of the general surgeon for this condition.

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The Present Status of the Use of

ORAL MEDICATIONS *in* DIABETES MELLITUS

Mechanism of Action of Orinase

ALLEN R. HENNES, M.D., and KELLY M. WEST, M.D.

Though the use of tolbutamide (Orinase) in clinical practice is relatively well defined, its mechanism of action, despite much work, sound and fury, is still unknown. This is perhaps not surprising when we consider that after more than 35 years of research, the mechanism of action of insulin is still considerably less than crystal clear. Figure 1 shows the structural formula of Tolbutamide. Carbutamide, a drug with a substantial hypoglycemic potency, but with more severe and frequent toxic effects, differs only in the presence of an NH_2 group instead of the CH_3 group on the benzene ring. It is interesting that the major tolbutamide excretion product,[1] the carboxyl derivative which is formed when the CH_3 group on the benzene ring is oxidized to

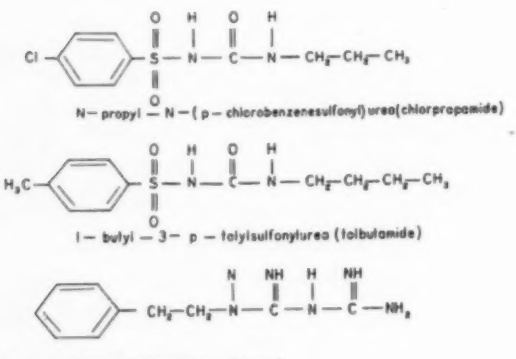
N – propyl – N – (p – chlorobenzenesulfonyl) urea(chlorpropamide)
1 – butyl – 3 – p – tolylsulfonylurea (tolbutamide)
Phenethyl Diguanide (DBI)

Fig. 1. Structural formulae of several oral hypoglycemic agents

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COOH and no other structure is changed, has no hypoglycemic effect.

Studies to determine the mechanism of action of the sulfonylureas can be grouped under four general categories:

1. Investigations designed to determine if the sulfonylureas produce their hypoglycemic effect by antagonizing hormones which produce hyperglycemia.

2. Studies to determine the effect of sulfonylureas on hepatic glucose output.

3. Studies of the effect of sulfonylureas on increasing secretion or decreasing degradation of insulin.

4. Determination of the metabolic changes associated with the hypoglycemia following administration of the sulfonylureas.

A number of studies have been designed to test the effect of sulfonylureas on antagonizing the hyperglycemic effect of certain hormones. Only a few will be mentioned. Clinical studies have shown that tolbutamide does not prevent a normal hyperglycemic response to epinephrine or glucagon, nor does it inhibit the hyperglycemic effect of large doses of adrenal 17-hydroxycorticoids.[2] Despite this clinical evidence that administration of tolbutamide does not impair hyperglycemic response to glucagon, epinephrine, and 17-hydroxycorticoids, nevertheless recovery from hypoglycemia, after acute administration of tolbutamide is slower than after acute administration of insulin when comparable degrees of hypoglycemia are produced. Vaughan has shown in experiments with rat and rabbit liver slices, that relatively high concentrations of tolbutamide (5×10^{-4} or 5×10^{-3} M) will decrease resynthesis of active phosphorylase.[3] This enzyme is required for breakdown of glycogen to glucose-1-phosphate, a required step in release of glucose from glycogen. Phosphorylase exists in an inactive and active form in the liver. Glucagon and epinephrine are thought to act in the liver by increasing the amount of the active form of phosphorylase. As pointed out above, clinical studies suggest that tolbutamide does not act by inhibiting the response to epinephrine or glucagon. Yet in vitro studies show that tolbutamide can inhibit the effect of both glucagon and epinephrine on glucose release from liver slices. Perhaps this in vitro effect has no physiological significance because of the relatively high levels of tolbutamide required to produce it, which are 5-10 times higher than blood levels obtained during tolbutamide induced hypoglycemia. However, as Vaughan suggests, concentration of tolbutamide by the liver, could occur because of preferential binding. It is also possible that the doses of epinephrine and glucagon used in the clinical studies were much higher than the amounts secreted normally in response to hypoglycemia and were sufficient to mask any antagonistic effect of the sulfonylureas.

Since the level of fasting blood glucose is the result of a balance between input of glucose from the liver and peripheral utilization of glucose, many studies have been designed to test the effect of tolbutamide on glucose output from the liver. Miller and Duiin[4] found that tolbutamide treated animals showed a marked increase in liver glycogen as compared to insulin treated animals. This effect was noted primarily in the fasted animal. Long and Sherry[5] were able to confirm that tolbutamide treated rats showed an increase in liver glycogen as compared to fasted control rats. However, liver glycogen was much less than in fed animals.

The effect of tolbutamide on "Hepatic" glucose output has been studied by several workers by catheterizing the hepatic vein. A decrease in hepatic glucose output under the influence of tolbutamide has been demonstrated uniformly. Whether this is due to increased utilization of glucose by the liver, as suggested by Recant and Fisher,[6] or whether it is due to inhibition of enzymes concerned in glycogen breakdown as suggested by Vaughan,[3] is at present unknown.

Though these studies have shown a decrease in hepatic vein output of glucose under the influence of tolbutamide, other studies[7, 8] have shown that the sulfonylureas can still produce a hypoglycemic effect in the hepatectomized animal. Therefore, suppression of hepatic output of glucose is not a necessary factor in production of tolbutamide induced hypoglycemia. This effect could, however, play an important part in slowing recovery from hypoglycemia.

The obviously important possibilities that the sulfonylureas might act by increasing secretion or decreasing destruction of insulin have been studied rather extensively. Tolbutamide is not effective in pancreatecto-

TABLE I

A comparison of some physiological effects of insulin and tolbutamide administration.

PHYSIOLOGIC EFFECT	INSULIN	TOLBUTAMIDE
Penetration of glucose into muscle and adipose tissue in vitro.	Marked increase	No effect
Liver Glycogen	No effect	Increase
Muscle Glycogen	Increase	No effect
Liver lipid synthesis	No effect on synthesis from C^{14} acetate	Increases synthesis from C^{14} acetate
Depot lipid synthesis	Increases synthesis from C^{14} acetate	No effect on synthesis from C^{14} acetate
Output of glucose from liver	?	Decrease
Effect on blood pyruvate	Increase	Decrease
Effect on venous inorganic phosphorus	Decrease	No consistent effect
Effect on specific activity of C^{14} Labeled glucose	Decrease	No effect

mized humans[2] or animals.[9] Neither is it effective in the juvenile diabetic, in whom plasma insulin activity cannot be demonstrated.[10] It was therefore apparent that tolbutamide was incapable of inducing hypoglycemia in the absence of insulin. Mirsky postulated that the sulfonylureas acted by inhibiting insulinase, a non-specific proteolytic enzyme system which destroys insulin. In vitro studies by Mirsky[11] have shown that high concentrations of tolbutamide can inhibit insulinase, but these are much higher concentrations than are normally obtainable in blood in vivo. Again, however, selective binding of tolbutamide by the liver, an organ with high concentrations of insulinase, could produce very high levels of tolbutamide in that organ. On the other hand, Cox et al[12] were unable to show an effect of tolbutamide on insulinase activity. Furthermore, Berson[13] and Weaver et al[14] have shown that tolbutamide does not inhibit the degradation of I^{131} labeled insulin in vivo. It seems, therefore, exceedingly unlikely that insulinase inhibition is an important factor in production of tolbutamide induced hypoglycemia under clinical conditions.

A large number of experiments have been done to test the hypothesis that tolbutamide acts by causing increased secretion of insulin. Only a few will be mentioned. One of the first was that of Colwell and Colwell,[15] who injected tolbutamide directly into the pancreatic artery and believed that they could produce a greater hypoglycemic effect in this fashion than by giving tolbutamide by other routes. Their data, however, do not according to their last published report[16] show clear cut differences between the intensity of the hypoglycemic effect produced by the injection into the pancreatic artery as opposed to those produced by the injections into the femoral vein.

Renold et al[17] and more recently Weaver et al[14] have been unable to demonstrate an increase in plasma insulin, as measured by the rat diaphragm technique during the periods of hypoglycemia induced by tolbutamide administration.

Other workers have compared metabolic changes accompanying tolbutamide induced hypoglycemia with those associated with insulin induced hypoglycemia. If tolbutamide acts by increasing secretion or decreasing

destruction of insulin, then at comparable levels of hypoglycemia physiological changes accompanying tolbutamide and insulin induced hypoglycemia should be the same. Many differences have been noted. (Table 1)

Purnell et al[18] were unable to show a decrease in venous phosphorus level during tolbutamide induced hypoglycemia, whereas a decrease in venous phosphorus was associated constantly with insulin induced hypoglycemia. They were also unable to show an increase in A-V glucose difference while an increase in A-V glucose difference, presumably indicating increased peripheral utilization of glucose followed insulin induced hypoglycemia. Hennes et al[19] found that hypoglycemia following administration of tolbutamide to normal subjects, was associated with a decrease in blood pyruvate, while comparable degrees of hypoglycemia produced by insulin administration were associated with an increase in levels of blood pyruvate. These findings have been confirmed by Recant and Fisher, who found that after administration of tolbutamide peripheral levels of venous pyruvate decreased in association with an increase in hepatic vein output of pyruvate.[6] Miller and Dulin[4] have found that hypoglycemia following tolbutamide administration to rats, is associated with an increase in liver glycogen, with little change in muscle glycogen. On the other hand, they found that insulin induced hypoglycemia is associated with an increase in muscle glycogen and no increase in liver glycogen. Ashmore et al[20] have found that insulin induced hypoglycemia is associated with increased incorporation of C^{14} glucose into adipose tissue fatty acids, while hypoglycemia following administration of tolbutamide was associated with increased incorporation of C^{14} into liver fatty acids. Further differences in the character of the responses to tolbutamide and insulin were domonstrated by Houssay.[21] He has shown that adrenalectomized animals are much more sensitive to the hypoglycemic effect of tolbutamide than are hypophysectomized animals. Hypophysectomized animals, on the other hand, are much more senstive to the hypoglycemic effect of insulin, than are adrenalectomized animals.

Thus, though there is agreement that tolbutamide produces hypoglycemia and insulin is required for its action there is much evidence to suggest that hypoglycemia following administration of tolbutamide differs in some respects from the hypoglycemia induced by insulin administration. It is probable that the mechanism of action of the sulfonylureas is complex. There is good evidence as previously noted that tolbutamide decreases hepatic output of glucose. Studies with C^{14} glucose[20] have shown that tolbutamide induced hypoglycemia is not associated with a more rapid decline of specific activity of blood glucose (ratio of radioactive to non-radioactive glucose) than is administration of saline. On the other hand insulin induced hyperglycemic is associated with a sharp decline in specific activity of blood glucose. If there were no increase in peripheral utilization of glucose, after administration of tolbutamide, the decline in specific activity of blood glucose would be less rapid because of decreased dilution of blood glucose with unlabeled glucose from the liver. The finding that specific activity of glucose did not change in association with hypoglycemia, which was presumably associated with a decrease in hepatic glucose output, suggests that the increase in peripheral utilization of glucose may have compensated for the decrease in output of glucose from the liver. The data of Recant and Fisher, showing an increase in hepatic pyruvate production in association with a decrease in peripheral blood pyruvate levels after administration of tolbutamide also suggest that both peripheral and hepatic mechanisms may be involved. It may be that changes in hepatic metabolism are secondary to alterations in peripheral metabolism of glucose produced by tolbutamide.

Many questions need to be answered before the mechanism or mechanisms of action of tolbutamide are known. Why must insulin be present before sulfonylureas can have a hypoglycemic effect? Insulin is thought to act primarily by increasing permeability of muscle and adipose tissue to glucose. It tolbutamide has no effect on cellular permeability, but influences pathways open to glucose only after glucose gets into the cell, it becomes apparent that tol-

butamide could have little or no effect in the absence of insulin because entry of glucose into the cell could not be increased. Permeability of the cell to glucose may be the "rate limiting" step in Orinase induced hypoglycemia and this step is markedly accelerated by insulin.

When glucose gets into the cell, several pathways are open to it. Much glucose is normally converted to fat and stored. Ashmore et al[23] have begun to study the effect of tolbutamide on conversion of glucose to fat. More work of this type is required.

Further work is also needed to clarify the effect of tolbutamide on levels of pyruvate. As previously noted, tolbutamide induced hypoglycemia is usually associated with a decrease in pyruvate, and insulin induced hypoglycemia with an increase. This could be due to a decrease in production of pyruvate or to an increase in utilization of pyruvate under the influence of tolbutamide. If less pyruvate is produced, perhaps orinase increases utilization of glucose by influencing the so called hexosemonophosphate or direct oxidative pathway. If more pyruvate is utilized, perhaps there is increased oxidation of this important three carbon fragment as it is produced in muscle. These possibilities have not as yet been investigated.

The possibility that the mechanism of action of orinase may be to some degree different in the different species should be mentioned. Similarly, it is possible that some of the apparent disparities in the results of the previously mentioned experiments are due to the fact that these experiments were carried out on several different species.

Summary of Mechanism of Action of Orinase

The mechanism of action of tolbutamide is unknown. Administration of this compound delays recovery from hypoglycemia and decreases output of glucose from the liver. However, these effects seem only supplementary to a primary action since hypoglycemia can be produced by administration of tolbutamide following hepatectomy. Because hypoglycemia following administration of tolbutamide differs physiologically in many respects from the hypoglycemia following insulin administration, it seems quite likely that the mechanism of action of insulin and tolbutamide are different. Further study of these intriguing compounds should add greatly to our knowledge of carbohydrate metabolism.

Clinical Use of Oral Hypoglycemic Agents

At present tolbutamide (Orinase) is the only compound commercially available which is effective in the treatment of diabetes when administered by mouth.

Selection of patients for treatment with tolbutamide. There is a large percentage of the diabetic population in which tolbutamide is not necessary or in which this drug is ineffective. Approximately one third to one half of all diabetic patients can be controlled by conventional dietary means alone. These patients do not need tolbutamide. Treatment with tolbutamide has been uniformly unsuccessful in thin "brittle" diabetics in whom the onset of diabetes occurred in childhood or early adult life. The use of tolbutamide alone may be dangerous and is contraindicated in diabetics who have a history of acidosis or coma. In diabetics with severe infections the use of tolbutamide alone is usually an ineffective substitute for insulin and its use in such instances should be avoided. It has been suggested that the administration of tolbutamide in addition to insulin to some young patients may result in greater stability of the diabetes. However, sufficient evidence is not yet available to establish the efficacy of tolbutamide in this regard.

The group of diabetics particularly suited for treatment with tolbutamide includes patients in the following categories.

1. Patients over forty years of age.
2. Obese patients.
3. Patients with "stable" diabetes.
4. Patients whose insulin requirements are less than 40 units per day. (However middle aged obese diabetics who are receiving over 40 units of insulin daily occasionally will respond to tolbutamide.)
5. Patients in the categories mentioned

above in whom standard dietary management has proved ineffective.

Several different tests have been devised in an attempt to predict which patients will respond favorable to tolbutamide. On the basis of extensive experience at the Joslin Clinic, Mehnert and his associates[22] suggested that one of the best guides in predicting whether treatment with tolbutamide would be successful was the fasting blood sugar four hours after a single dose of 3 grams of tolbutamide by mouth. Regardless of the initial level, if the blood sugar reached normal (below 110 mg. percent, when measured by the Folin-Wu Method) four hours after the drug treatment was likely to be successful. If, on the other hand, the blood glucose did not reach normal after this test dose a favorable response to treatment was unlikely. This test was, of course, not infallible but false positive and false negative tests were uncommon. Williams[23] and Duncan[24] have also devised similar tests for estimating the responsiveness of a patient to tolbutamide.

There is some difference of opinion among authorities as to the percentage of the diabetic population in which treatment with tolbutamide is appropriate. Those who permit moderate hyperglycemia and moderate glycosuria usually administer tolbutamide to a greater percentage of their patients since there are patients in whom tolbutamide produces a reduction in glucosuria but does not abolish it. On the other hand, those who believe that it is important to achieve normal or near normal blood glucose values whenever possible, discontinue tolbutamide and administer insulin when the administration of tolbutamide does not reduce the blood glucose to levels near normal. There is another theoretical objection to treatment with tolbutamide. The principal cause of morbidity and mortality in older diabetics is atherosclerosis. Although it has not been proven that the administration of insulin corrects the aberrations of lipid metabolism which enhance the development of atherosclerosis the effects of insulin on lipid metabolism are direct and profound, while the effects of tolbutamide on lipid metabolism are almost completely unknown. It is therefore possible that insulin exerts a favorable influence in inhibiting development of atherosclerosis which is not exerted by tolbutamide. It should be emphasized, however, than an advantage of insulin over tolbutamide in this respect has not been proved.

Many patients and some physicians have attempted to use tolbutamide as a substitute for conventional dietary treatment. It has not been possible, however, to control hypoglycemia with tolbutamide when either carbohydrate or caloric intake or both is excessive. Thus successful therapy with tolbutamide depends on the observance of standard dietary measures.

Technique of treatment with tolbutamide. Patients who do not respond satisfactorily to doses of 1 to 1.5 grams daily do not usually respond to larger doses. If the response to a daily dose of one gram is satisfactory as evidenced by control of hyperglycemia and glycosuria the results of treatment may be reviewed after 2-4 weeks and a maintenance dose of .5 to 1 gram selected. In some instances treatment has been started with doses as large as 3 grams daily for a few days before a smaller maintenance dose is administered. It is sometimes possible to decide earlier whether or not satisfactory response will occur when larger doses are administered initially. However, as pointed out above if one gram of tolbutamide daily does not produce a satisfactory response within a few days further treatment with larger doses is not likely to be successful. Patients who have been on diabetic diets for more than two weeks usually respond to a dose of one gram daily within one to six days if they are going to respond to treatment with this drug. Patients who are being changed from insulin therapy to tolbutamide should be under careful observation during the transition period since ketocidosis may occur when insulin is withdrawn.

It has been shown recently that the biologic half time of tolbutamide is about four hours.[25] This indicates that after the drug has been administered orally only a small percentage of the dose is present in the body in an active form 24 hours later. This suggests that the drug ought to be administered in individual doses. However in patients

who are responsive to the drug a single dose of 0.5 to 1 gram daily administered before breakfast is often effective. Recently the authors have most frequently used a dose of 0.5 gram twice daily.

Toxicity. With dosages of 1 gram daily toxic reactions to tolbutamide are uncommon and usually mild. The undesirable effects most frequently seen have been mild digestive disturbances and urticaria.[22] Clinically significant hypoglycemia rarely occurs in diabetic patients.

Other new antidiabetic agents. Two new oral hypoglycemic agents are being investigated rather extensively, although neither is commercially available as of July, 1958. A biguanide derivative known as DBI (Figure 1) has been tested recently in diabetic patients.[26] It has been found to be effective in approximately the same types of patients in whom tolbutamide has been effective. However, there is some evidence suggesting that it is more likely to be effective than is tolbutamide in patients in whom the disease has started in early adult life.[26] Nausea and vomiting occur very frequently in patients who are treated with DBI. Therefore, it will be necessary to accumulate more experience before deciding whether this drug will have a place in the treatment of diabetes.

Chlorpropamide, a drug chemically related to tolbutamide (Figure 1) is at present under extensive clinical investigation. Studies in normal subjects have shown that this drug is more potent than tolbutamide[27] but it is not yet certain whether the increase in potency is due to a slower rate of excretion of the compound or the other factors. The toxicity of chlorpropamide in man has not been adequately evaluated as yet.

Summary of Clinical Use of Tolbutamide

Tolbutamide, when administered in addition to standard dietary therapy may be effective in controlling hyperglycemia in a selected group of diabetic patients. Such patients are usually over forty years of age. The dose most frequently employed by the authors is .5 gram twice daily. The factors which influence the selection of patients for treatment with tolbutamide have been discussed, and the clinical use of this drug has been briefly described.

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The Use of Chlorpropamide *as an* Oral Hypoglycemic Agent

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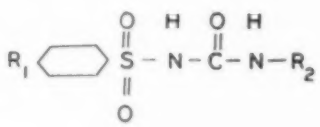
This study was designed to evaluate the hypoglycemic effect of chlorpropamide, a sulfonylurea compound, in diabetes. The structural similarity to tolbutamide (Orinase) and to carbutamide can be seen in Figure 1. Chlorpropamide differs from tolbutamide only in that it has one less methylene group in the side chain and has a chlorine atom attached to the benzene ring instead of a methyl group.

Previous investigators in the Department of Research at the Pfizer Company found that the acute and chronic toxicity of chlorpropamide and tolbutamide were qualitatively and quantitatively similar in animals.[1] At comparable dosage levels chlorpropamide and tolbutamide have similar hypoglycemic effects in rats and dogs.

Studies done by West and McCampbell[3] to determine the hypoglycemic effectiveness of chlorpropamide in man revealed that chlorpropamide administration was followed by greater and more prolonged hypoglycemia than was administration of tolbutamide. The results of their experiments are shown in Figure 2. In their experiment 10 subjects had been kept in a fasting state after 7:00 p.m. except for eight ounces of milk at mid-



	R_1	R_2
Tolbutamide	CH_3	C_4
Carbutamide	NH_2	C_4
Chlorpropamide	CL	C_3

Figure 1. Structural difference of the sulfonylureas.

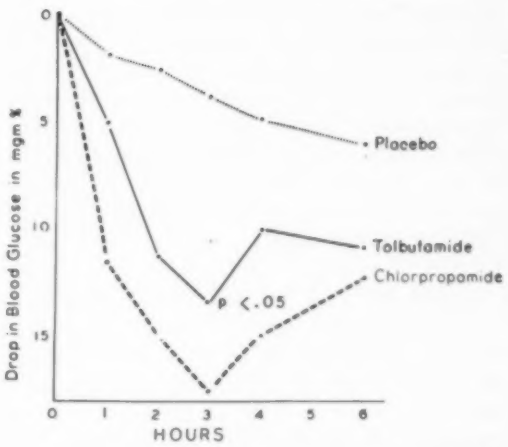


Figure 2. Blood glucose response to Tolbutamide, Chlorpropamide, and Placebo.

night. After a specimen of venous blood had been drawn at 7:00 a.m. the following morning, each subject received by mouth one gram of chlorpropamide, tolbutamide, or sodium bicarbonate. Venous blood glucose samples were then determined every hour for four hours and again at the end of the sixth hour after drugs had been given. The tests were repeated at weekly intervals until each subject had received all three drugs in a random fashion. Chlorpropamide produced greater hypoglycemic responses than tolbutamide. Three hours after administration the difference between the hypoglycemic responses was statistically significant ($p < .05$ paired control t-test).

A second experiment was carried out[3] to determine the level of blood glucose 12 and 18 hours after administration of one gram of tolbutamide and of chlorpropamide during a period in which the subjects ingested standard feedings. Evaluation of the data

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indicated that a statistically significant hypoglycemic effect was produced by chlorpropamide at 12 and 18 hours, while tolbutamide failed to elicit a statistically significant response.

In the present study, the action of chlorpropamide was observed in a group of diabetic patients, some of whom have been receiving the drug for five months. All the patients were hospitalized initially and each had a general medical evaluation. Two types of patients were selected for study: 1. New diabetics who continued to have elevated fasting blood glucose values after treatment with a diet containing less than 200 grams of carbohydrate per day for from one to two weeks. 2. Diabetics requiring 15 to 30 units of insulin daily.

Initial baseline studies included fasting blood gulcose (using the Nelson[4] method), thymol turbidity determinations, bromsulphthalein excretion tests, white blood counts, and hemoglobin determinations. Patients received a diet containing 1500 to 1800 calories with 150 grams of carbohydrate for a period of from five to 14 days. Daily fasting blood glucose levels were measured and urinary glucose and acetone were determined four times daily, at 7:00 a.m., 11:00 a.m., 4:00 p.m., and 9:00 p.m. After the fasting blood glucose levels had stabilized, chlorpropamide was begun. When the study was started, the effective blood level and potency of chlorpropamide was unknown and a single daily dose of one gram per day was arbitrarily chosen and administered one half hour before breakfast. Patients taking chloropropamide were followed for periods averaging two weeks before they were discharged. They were seen at intervals of two weeks in an outpatient clinic on which occasions the baseline laboratory studies were repeated.

Figure 3 shows the fluctuation of the blood glucose in four diabetics to whom chlorpropamide was administered. The horizontal bar represents the period during which chlorpropamide was administered. In the first division of the figure, the variation of the fasting blood glucose by diet alone is shown.

The first patient was a 65 year old white male who had had symptoms of polydipsia, polyphagia, and polyuria for several months. His fasting blood glucose on admission was 278 mg. percent. After diet alone for two weeks the fasting blood glucose values ranged from 174 to 194 mg. percent and treatment with chlorpropamide was started. The gradual decline in the fasting blood glucose may be noted. At the time of discharge his fasting blood glucose was 82 mg. percent. After he was discharged from the hospital his fasting blood glucose values ranged from 74 to 94 mg. percent. One month after discharge his dosage was decreased to 500 mg. daily. Subsequent fasting blood glucose values have continued to fluctuate between 85 and 92 mg. percent.

The second patient was a 66 year old white male found to have a fasting blood glucose of 278 mg. percent. This declined only to 214 mg. percent by diet alone. On one gram daily of chlorpropamide there was a gradual decline of the level of the fasting blood glucose, and at the time of discharge, his fasting blood glucose was 95 mg. percent. Since he experienced symptoms of hypoglycemia as an outpatient, the dosage was decreased to 500 mg. daily. Since then his fasting blood glucose values ranged from 70 to 95 mg. percent.

The third patient was a 67 year old white male who had had symptoms of diabetes for one year. At the time of admission to the hospital his initial fasting blood glucose was 264 mg. percent. On diet alone this decreased to 140 mg. percent. His blood glucose also became progressively lower on chlorpropamide administration. Since his discharge he has shown a response to treatment similar to the other patients with fasting blood glucose values ranging from 48 to 82 mg. percent. He has experienced hypoglycemic reactions, usually in the forenoon. Three months after therapy had been started the dosage of chlorpropamide was decreased to 500 mg. and subsequently fasting blood glucose values have ranged between 65 mg. percent and 95 mg. percent.

The fourth patient was a 51 year old white male, who had had diabetes for approximately eight years and who had been treat-

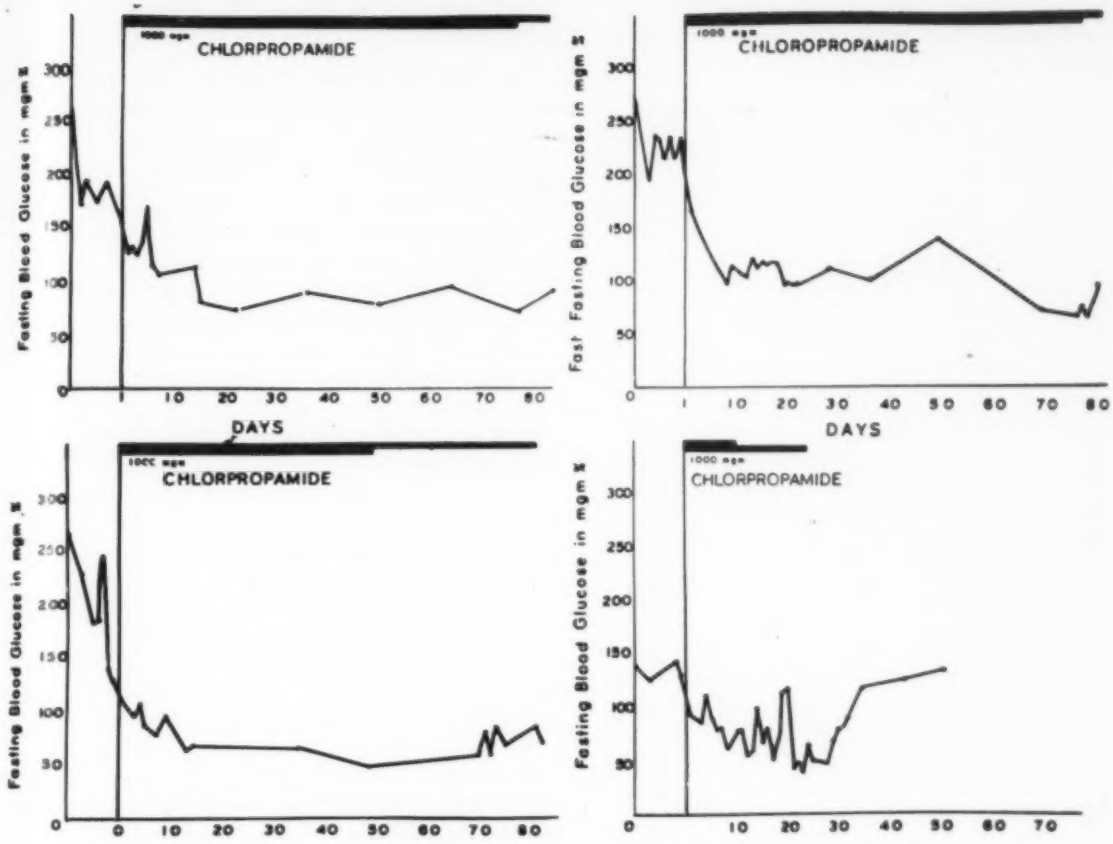

Figure 3. Effect of administration of chlorpropamide on fasting blood glucose.

ed with 10 units of NPH insulin daily. On diet alone his blood glucose rose slowly to 143 mg. percent. On one gram chlorpropamide daily he showed a response similar to that of the other patients. His dose was reduced to 0.5 grams daily after his fasting blood glucose had fallen to 50 mg. percent. The fasting blood glucose began to rise over a period of one week and then fell to a low of 38 mg. percent at which time the drug was discontinued. The fasting blood glucose then rose slowly. Three weeks later his fasting blood glucose was 124 mg. percent, and at five weeks it was 132 mg. percent.

In the cases illustrated here and in the other cases in which chlorpropamide was effective, the blood glucose gradually declined during the first six to 11 days to levels of 100 mg. percent or below, suggesting a cumulative action. After a period of one to two months the fasting blood glucose often declined further, and in these cases the dosage was decreased to 500 mg. daily. Determinations of urinary glucose were made four times daily. These tests became negative within three-five days after chlorpropamide therapy was started and have continued to be negative for five months.

Data later received from investigators in the Research Department of Charles Pfizer and Co.[5] showed that blood levels of chlorpropamide in normal volunteers rose gradually before reaching a plateau about the fifth day when a single daily dose was administered. Those on 0.5 gram per day had blood levels which reached approximately 15 mg. percent, and those on one gram per day had levels which reached 25 to 30 mg. percent. Since the "effective" blood level of tolbutamide in patients with mild diabetes has been found to be 10 to 15 mg. percent,[6] it was recommended that no diabetic

be started on more than 0.5 gram of chlorpropamide daily since this dose produces satisfactory blood levels.

Thirteen patients received chlorpropamide during this study. Those patients whose fasting blood glucose values have shown satisfactory responses have usually been elderly, stable diabetics, often obese, requiring 15 to 30 units insulin daily, or diabetics in whom very strict limitation of carbohydrate intake is effective. A juvenile diabetic and a diabetic whose diabetes began in his third decade both requiring 40 to 60 units insulin daily, showed progressively increasing hyperglycemia, glycosuria and acetonuria during a period of three days in which chlorpropamide, one gram daily was substituted for insulin. On the other hand two elderly patients with very mild diabetes experienced severe hypoglycemic reactions manifested by unconsciousness and blood glucose levels of 28 and 54 mg. percent respectively on this dose of chlorpropamide. Each of nine additional patients with mild diabetes has shown a satisfactory response to chlorpropamide therapy.

There have been no toxic or allergic manifestations as yet in any of these patients. Since chlorpropamide is a chlorinated hydrocarbon, the possibility that liver toxicity might occur has been considered. In approximately 500 patients treated to date by all investigators, two cases of jaundice have been reported.[5] The jaundice subsided in each instance when the drug was withdrawn. Further information concerning these cases is not available. Our patients have had tests of liver function every two weeks, including bromsulphthalein excretion tests, and no significant changes have occurred. Hemoglobin determinations, white blood counts and complete urinalyses have also been performed at intervals of two weeks and no evidences of toxicity have been noted.

As with tolbutamide the mechanism of action of chlorpropamide is unknown.

Summary and Conclusions

1. A new sulfonylurea compound, chlorpropamide, has been found to be effective in the treatment of diabetes mellitus. 2. The same criteria useful in the selection of patients for treatment with tolbutamide apply to those being considered for treatment with chlorpropamide. 3. The elderly, mild, diabetic appears to be more prone to hypoglycemic reactions when treated with chlorpropamide than when treated with comparable doses of tolbutamide. 4. The fasting blood glucose seems to reach a plateau during the sixth to the eleventh day after therapy with chlorpropamide is initiated. 5. The onset of action of chlorpropamide is approximately the same, but the duration of action is greater than that of tolbutamide. 6. Gram for gram chlorpropamide seems to be a more potent hypoglycemic agent than tolbutamide. This could be due to greater potency of chlorpropamide at equivalent blood levels, or to better absorption of chlorpropamide than tolbutamide, or to slower detoxification and excretion of chlorpropamide.

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921 N.E. 13th Street, Oklahoma City, Oklahoma

BIRD OF PARADISE SEED POISONING

THE AUTHOR

Harold A. Shoemaker, Ph.D., pictured right, Professor of Pharmacology, is director and founder of the Oklahoma Poison Information Center, University of Oklahoma Medical Center. Since its formal beginning in April, 1956, the Center has served as a necessary part of the Medical School curriculum and has, in addition, provided service of incalculable value to the physicians of the state.

The indefatigable energy of Doctor Shoemaker in providing this service, in addition to his already full schedule is to be highly commended.

H. A. SHOEMAKER, Ph.D.

The Oklahoma Poison Information Center has received a number of calls regarding poisoning in children resulting from eating the seeds of Bird of Paradise, and since very little information is available in the literature, it was thought advisable to publish a note on the subject.

There are two plants which are popularly known as "Bird of Paradise," *viz., Strelitzia Reginae,* and *Caesalpinia Gilliesii.* The former is frequently used by florists in flower arrangements and is not involved. The latter, *Caesalpinia Gilliesii,* also sometimes listed as *Poinciana Gilliesii,* is a rather showy plant used for decorative purposes in yards in Oklahoma and other states where the winters are not too severe. It is a shrub or small tree with many small leaflets, scarcely one half inch long, oblong, obtuse, glabrus. The flowers are light yellow, with brilliant red stamens protruding four-five inches in terminal racemes.[1] The seed pods bear a close resemblance to the green pea pod.

The first report of poisoning by the seeds of this plant was by Cleland[2] who gave the following report of the illness of four children, age two years and six months to four years:

"They ate the seeds about 10 a.m. and were admitted at 6:30 p.m. They had been vomiting and were drowsy and flushed, and one child had a persistently high pulse rate. All were discharged in 48 hours."

The Arizona Poisoning Control Information Center[3] reports two cases. Each child ingested approximately five of the green seed pods. Within 30 minutes after ingestion, both boys displayed severe gastrointestinal symptoms characterized by nausea, vomiting and profuse diarrhea. The symptoms abated after 24 hours.

We are indebted to Bill J. Simon, M.D., of Perry, Oklahoma for the following detailed report of two cases of poisoning by Bird of Paradise seeds.

"They were brought to my office approximately four hours following the eating of the seeds.

"The symptoms were extreme pallor, nausea, vomiting, drowsiness, and vertigo upon movement. Their blood pressures were taken repeatedly and found

to be 90/50 (they were approximately eight years of age), pupils appeared normal and reacted, mild tachycardia attributed to exertion of vomiting.

"One child ate approximately a handful of seeds, whereas the other ate only six or eight seeds.

"Vomiting was so severe that the child who ingested the larger quantity was hospitalized and administered parental fluids. Daily urinalyses were run for three days and found to be normal.

"The children's symptoms subsided overnight. They resumed normal activities the following day."

There apparently is a difference in the symptoms depending upon whether the entire pod has been ingested or just the seeds. In all of the cases about which we have been consulted only the seeds had been ingested and the symptoms were as outlined in Doctor Simon's report. In the Arizona cases, the entire pods had been eaten and diarrhea was a prominent symptom along with the vomiting.

It is not known as yet what the substance is that produces the symptoms. The Arizona group[3] is of the opinion that the severe gastrointestinal symptoms are due to the presence of an as yet unidentified irritating substance.

If seen early after a history of ingestion, it is recommended that emesis be induced to remove the material since it is not likely that unmasticated seeds or shreds of pod can be removed by gastric lavage. If vomiting has already developed then supportive therapy only need be used. Keep the patient warm and give adequate fluids. Correct any electrolyte imbalance that may result from the vomiting and diarrhea.

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ABSTRACTS

Enhanced Urinary Excretion of CO-60 Vitamin B-12 Produced by Delayed Release Capsules

P. C. JOHNSON,* and E. S. BERGER,**

Blood, Vol. 8, No. 5, May 1958

Patients without known hematologic disease ingested 8 MCG of Cobalt-60 labeled Vitamin B-12 as a water solution or as various types of Spansules, SKF, timed for release in various areas of the gastrointestinal tract. All groups showed approximately equal fecal excretion. However, the Cobalt-60 labeled B-12 urinary excretion after a loading dose was greatest following delayed release. This suggests that the rate of release of Vitamin B-12 influences its metabolism and that delayed release Vitamin B-12 is absorbed as well or better than Vitamin B-12 released in the stomach where the highest concentrations of intrinsic factor are to be expected.

*Chief, Radioisotope Service, VA Hospital, and Associate Professor of Medicine, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

**Clinical Assistant in Medicine, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

A Comparison of the Serum Lipids, Lipoproteins, Glycoproteins, Urinary 17-Ketosteroids and Gonadotropins in Eunuchs and Control Male Subjects

ROBERT H. FURMAN,* R. PALMER HOWARD,** M. R. SHETLAR,*** E. CORINNE KEATY,**** and RICHARD IMAGAWA.*****

Circulation 17: 1076-1085, 1958

Eunuchs and uncastrated male subjects are compared with respect to serum lipids, lipoproteins and glycoproteins, and with respect to the urinary excretion of gonadotropins and 17-ketosteroids.

The mean high density -$S_{1.21}$ 0-12 ("alpha") lipoprotein concentrations were consistently higher, and the lower density -$S_{1.21}$ 25-40 of 25-70 ("beta") lipoprotein concentrations consistently lower, in eunuchs than in uncastrated controls, irrespective of age at the time of study or time of castration. The ratio of "alpha" to "beta" lipoproteins was also consistently higher in eunuchs. These differences are characteristic of androgen withdrawal or estrogen administration.

The mean serum cholesterol level was significantly lower in the young eunuchs than in young controls. Lower individual serum cholesterol values in the middle aged eunuchs were noted only in those who had undergone gonadectomy prior to the seventeenth year of age. Mean serum cholesterol levels of the middle and old age castrated subjects and controls did not differ significantly.

The mean serum glycoprotein concentration was higher in eunuchs than in the controls. This was also true for the ratio $\frac{\text{glycoprotein hexose}}{\text{total protein}} \times 100$.

Urinary gonadotropin excretion was in excess of 192 mouse uterine units per day in 22 of 24 eunuchs, while only three of 19 control subjects excreted more than 192 units per day.

Urinary 17-ketosteroid excretion per day did not differ significantly between the two groups. However, the urinary 17-ketosteroid concentration was significantly higher in the controls.

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**Associate Professor of Research Medicine, Department of Medicine, University of Oklahoma School of Medicine.

***Associate Professor, Department of Biochemistry, University of Oklahoma School of Medicine.

****Research Associate.

*****Research Associate.

Pathways of Carbohydrate Formation in Man
II. "The Effect of Diabetes and Glucocorticoid Administration on Isotope Distribution in Glucose from Subjects Gives 1-C-14 Acetate."

WALTON W. SHREEVE* and ALLEN R. HENNES.**

J. Clin. Inv., July, 1958

1-C^{14} Acetate was given intravenously to two ketotic labile diabetics and to two stable adult diabetics who had received large doses of prednisone. Distribution of radioactivity in the glucose isolated from these subjects was determined. Ninety-six to ninety-eight percent of radioactivity was found in carbon 3 and 4 of glucose, consistent with predictions based on known reactions of the Kreb cycle. Small amounts of tracer were found in carbons 1, 2, 5 and 6, suggesting derivation by reactions of the pentose phosphate cycle. Labile diabetics with marked ketosis incorporated approximately 4% of administered radioactivity into free body glucose, approximately two times as much as found in non-diabetics. Administration of prednisone was not associated with an increased incorporation of C^{14} into glucose. No abnormal pathway for gluconeogenesis from acetate was revealed by these studies.

*Brookhaven National Laboratories, Long Island, New York.

**Assistant Chief, Medical Service, Veterans Administration Hospital and Assistant Professor of Medicine, University of Oklahoma School of Medicine.

FACULTY NEWS

HERBERT H. JANSZEN, M.D.

Herbert H. Janszen, M.D., was appointed July 13, 1958, as Assistant Chief of Psychiatry Service in Charge of Mental Hygiene Clinic at the VA Hospital and as Assistant Professor in the Department of Psychiatry at the University Hospital. Doctor Janszen is the first full time head of the Mental Hygiene Clinic at this hospital in several years.

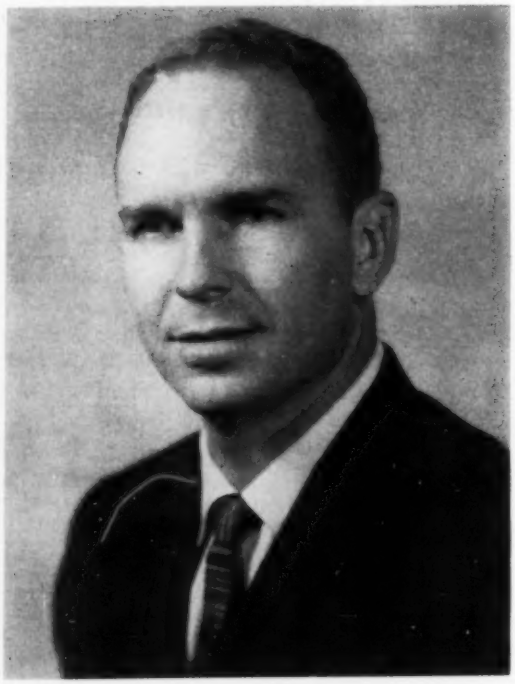
Doctor Janszen is a native of Texas and received a B.A. degree from the University of Texas in Austin, as well as a M.D. degree from the University Medical Branch at Galveston. He interned at Indianapolis University Medical Center and Glockner-Penrose Hospital in Colorado Springs. He was on the staff at Austin State Hospital for a number of years before taking residency at Winter VA Hospital at Topeka, Kansas, at which time he also held an appointment as Fellow at Menninger School of Psychiatry. Following that, he was Chief of Mental Hygiene Clinic in the VA Regional Office at Kansas City and Instructor on the staff of the Kansas University Medical Center.

JOHN ROBERT SOKATCH, Ph.D.

John Robert Sokatch, Ph.D., joined the faculty of the School of Medicine as Assistant Professor of Microbiology on July 14, 1958. His appointment to the staff fills the vacancy created by the resignation of Doctor Hal H. Ramsey and, like his predecessor, Doctor Sokatch is a bacterial physiologist.

After receiving the B.S. degree in 1950 from the University of Michigan, Doctor Sokatch continued his education at the University of Illinois where he earned the M.S. degree in 1952 and his Ph.D. in 1956. While at Illinois he was associated with Doctor I. C. Gunsalus in teaching bacterial physiology and in research which included studies on glucose-1-C^{14} fermentation by lactic acid bacteria and aldonic acid metabolism of Streptococcus facalis.

Doctor Sokatch is a member of the Society of American Bacteriologists, the American Chemical Society, Sigma Xi, Alpha Chi Sigma and Phi Lambda Upsilon.

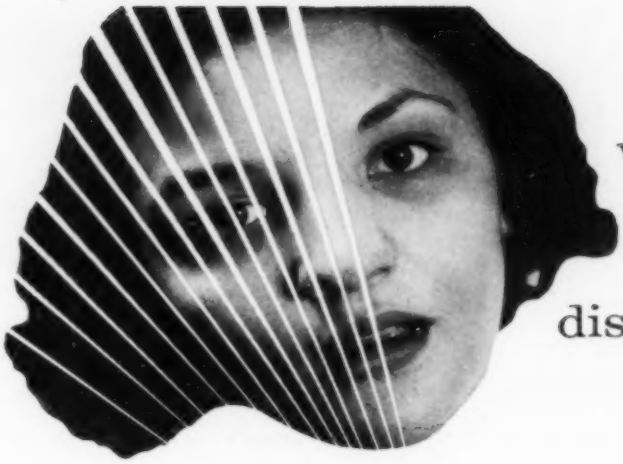


BOYD K. LESTER, M.D.

Boyd K. Lester, M.D., has been appointed Instructor in Psychiatry, University of Oklahoma School of Medicine.

Doctor Lester, a native Oklahoman, graduated from the University of Oklahoma School of Medicine in 1954 and completed his specialty training in this institution.

Doctor Lester is in charge of the Psychiatric Out-patient Clinic at University Hospital, a department in which an increasing number of medical students are participating.



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*A Symposium on the Pharmacologic Effects of Dartal on the Liver, Chicago, Searle Research Laboratories, Feb. 7, 1958.

PRESIDENT'S LETTER

For a thousand years, the mutual respect between law and medicine has been beyond reproach. But, in recent years, abuses and misunderstandings have become far too frequent, creating fear and distrust. This undesirable development is of great concern to our two professions, and both the American Bar and the American Medical Association have taken steps to correct this trend.

In June 1958, at San Francisco, the American Medical Association adopted a new Code for doctors and lawyers which will serve as a guide for physicians and attorneys in their interrelated practice.

This code* was formulated by a joint national Medico-Legal Liaison Committee composed of representatives of the American Bar Association and the American Medical Association.

In keeping with this action, the Oklahoma State Medical Association has taken the first step in preparing a similar code**, which has been presented and approved by the Council. In due time, our communities will take the code to the State Bar Association for further study and approval.

All of this provides an important yardstick for ethical behavior. Let us be sure that medical men will uphold their heritage of dignity and honor.

E. C. Mohler, M.D.

E. C. MOHLER, M.D.
President

*The Interprofessional Code of the AMA and ABA.

**The proposed state code appears on page 672.

Medical News

AMA Clinical Meeting To Draw 3,000 Physicians

More than 3,000 physicians are expected to attend the American Medical Association's 12th clinical meeting December 2-5 in Minneapolis. Designed to help the family physician solve his daily practice problems, the meeting has been planned in cooperation with Minneapolis physicians. Doctor N. L. Gault, Jr., Minneapolis is the scientific program chairman.

This is the fifth time the AMA has met in the Twin Cities, although it is the first clinical session. Annual meetings were held in Minneapolis in 1913 and 1928 and in St. Paul in 1882 and 1901.

The scientific portion of the program will be held in Minneapolis Auditorium, while the House of Delegates, the AMA policy-making body, will meet at the Leamington Hotel, headquarters for the meeting. In Minneapolis Auditorium will be 100 scientific exhibits prepared by physicians and the AMA Council on Scientific Assembly.

There will also be approximately 130 technical exhibits presented by pharmaceutical houses, medical equipment manufacturers, food processors, medical book publishers and other commercial organizations.

Approximately 200 physicians will participate in lecture meetings, symposiums, and panel discussions on such subjects as neurology and psychiatry, cardiovascular disease, arthritis, orthopedics and various other medical topics.

Approximately 35 medical motion pictures will be shown in Minneapolis Auditorium. A special feature will be a symposium on proctology Wednesday evening, December 3. Moderated by Doctor Raymond Jackman, Mayo Clinic, it will include three films made by Doctor Jackman; Dr. Malcolm Hill, Los Angeles, and Doctor Lawrence Abel, London, England.

Another special feature of the meeting will be a trans-Atlantic conference between AMA members in Minneapolis and British Medical Association members in Southampton, England. It is scheduled for Friday, December 5. The British association will be holding a clinical session at that time.

Closed circuit colored television again will be shown to doctors attending the meeting. It will be sponsored by Smith, Kline and French Laboratories, Philadelphia pharmaceutical house. Programs originating in the Mayo Memorial Building of the University of Minnesota Hospital will be shown in Minneapolis Auditorium. Among the topics will be cardiac by-pass, neurology, orthopedic problems of the extremities, and caesarian section.

The Woman's Auxiliary to the AMA, which will hold no regular meetings, will sponsor a series of tours for physicians' wives during the meeting.

Registration for the meeting will begin at 8:30 a.m., Tuesday, December 2. The meeting will close each evening at 5:30 p.m., and Friday, December 5, at noon. All reservations for Minneapolis hotels should be cleared through the AMA Subcommittee on Hotels before November 22, 1958.

Foreign Medical Graduate Test Set

More than one thousand graduates of foreign medical schools took the second American medical qualification examination of the Educational Council for Foreign Medical Graduates Tuesday, Sept. 23. The examination was given in more than 60 examination centers throughout the world.

The Educational Council for Foreign Medical Graduates, with headquarters at 1710 Orrington Ave., Evanston, Ill., was founded in 1957 to aid graduates of foreign medical schools to establish their qualification to as-

sume internships or residencies in United States hospitals.

Sponsoring organizations of the ECFMG are the American Hospital Association, the American Medical Association, the Association of American Medical Colleges, and the Federation of State Medical Boards of the United States.

A total of 298 candidates took the first examination, held last March in 17 centers in the United States, and 152 received a passing score, Doctor Dean F. Smiley, ECFMG executive director said.

The second examination was the first to be given at examining centers abroad as well as in the United States. Thirty centers have been established in Latin America, the Far East, the Middle East, and in Europe.

All of the 1,136 candidates taking the 7½-hour examination have had their credentials approved by the ECFMG as having had 18 or more years of formal education, including at least four in a recognized medical school, Doctor Smiley said. He added that the examination tests the candidates' knowledge of English as well as of medicine.

Foreign medical graduates passing the examination who enter the United States on exchange visitor visas may participate in the National Intern Matching Program or may apply directly to a hospital for an internship or residency, Doctor Smiley said.

Foreign medical graduates passing the examination and entering the United States on immigrant visas may be admitted to licensing examinations in a least 14 states, Doctor Smiley said. A number of the medical specialty boards in the United States will accept certification by the ECFMG as satisfying their requirement that candidates for their certifying examinations are graduates of approved schools of medicine, according to Doctor Smiley.

Two American medical qualification examinations will be held in 1959, on Feb. 17 and Sept. 22.

Mine Worker Fund Claims Savings in Medical, Hospital Costs

United Mine Workers Welfare and Retirement Fund's annual report claims a 2.4% or $1,448,909 savings over the previous year in total cost for hospital and medical care, "notwithstanding the sharp increase in such costs throughout the nation." The report for the fiscal year ending last June 30 frankly states that the savings are due to the elimination of the free-choice-of-physician arrangement and such other procedures as cutting down on stay in hospitals. The report comments:

"The trust fund's official files and records . . . are replete with evidence showing that the primary quality and cost requirements of trust fund regulations were not being met under the previous free-choice-of-physician arrangements whereby the fund had permitted the beneficiary free choice of physician and had paid every physician so chosen for any service he billed the fund, and had allowed him to hospitalize any beneficiary at fund expense whenever and for as long as he desired."

Other report highlights: (1) About 1 million miners and their dependents are covered by the hospital and medical services provided by the fund, and during the past year 85,426 beneficiaries received hospital and medical care benefits, and (2) the fund paid out $58,135,684 for hospital and medical care which involved 1,458,385 days of hospitalization, 1,311,088 hospital visits by physicians and 969,801 office and out-patient clinic consultations.

Labor Will Again Push Forand Bill

A pamphlet just issued by the AFL-CIO confirms that labor's national leadership is moving the Forand bill high up on its priority list of bills it wants passed in the next session of Congress. The booklet, "Labor Looks at the 85th Congress," is mainly a review of the last two years, but it also looks ahead. It locates the Forand bill as fourth of 17 legislative objectives next year, de-

claring that labor will work for enactment, "through the social security system," of a program of "hospital, nursing home and surgical care for those receiving benefits." The booklet was prepared by the AFL-CIO's legislative department, headed by Andrew J. Biemiller, former Democratic Representative from Wisconsin.

> Only objectives ranked higher on the list are "complete overhaul of the Taft-Hartley act," legislation to "safeguard unions from racketeers and from improper activities" on the part of both labor and management, and extension of the fair labor standards act and an increase of the minimum wage to $1.25 per hour.

The Forand bill would provide hospitalization and surgical care for all social security beneficiaries. Last session is was among social security changes on which hearings were held by the House Ways and Means Committee, and was the subject of considerable discussion, but was not included in other provisions reported out by the committee. On the committee's instructions, the Department of Health, Education and Welfare is making a comprehensive study of the financing of medical care for the aged.

American Board of Ob-Gyn To Hold Part 1 Examinations

The Part 1 Examinations of the American Board of Obstetrics and Gynecology are to be held in various parts of the United States and Canada, on Friday, January 16, at 2:00 p.m.

Candidates notified of their eligibility to participate in Part 1 must submit their case abstracts within thirty days of notification of eligibility. No candidate may take the written examination unless the case abstracts have been received in the office of the secretary.

Current Bulletins outlining present requirements may be obtained by writing to Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

New Service Protects Physicians' Credentials

A Central Repository for Medical Credentials was established on July 1, 1958 by the World Medical Association in an effort to provide physicians all over the world with a central, protective storage for credentials identifying them as doctors of medicine.

The repository idea resulted from experiences occurring during war or national uprisings where medical records were often lost or destroyed. Many physicians are today unable to utilize their professional skills because of inability to furnish evidence of their training. Under the new program, a physician will always be able to prove himself medically trained and fully accredited to practice.

In the United States, the lifetime cost of service on a one-payment basis to the newly graduated doctor is approximately $60.00. An actuarial schedule has been established for physicians in various age groups. There is also a ten year service rate offered.

Repository officials suggest that the credentials deposited include an official medical school record, medical diploma and specialist credentials. American doctors should not send their original credentials, but should send photostatic, microfilm or notarized copies of the originals.

Requests for forms and additional information in regard to the Central Repository for Medical Credentials should be directed to the World Medical Association, 10 Columbus Circle, New York 19, New York.

Pamphlet Explains SS Medical Reports

"The Patient Asks for a Medical Report" is a new, informative pamphlet which explains the preparation of medical reports for use in social security disability determinations.

Prepared by the U. S. Department of Health, Education and Welfare, the pamphlet is available to physicians in the state who write to the Oklahoma City District Office of the Social Security Administration, 128 N. W. 4th, Oklahoma City.

Keogh Bill Promotion Planned

A plan of action to obtain passage next year of the Keogh bill has been approved by the executive committee of the American Thrift Assembly and presented to the assembly's board. ATA already is at work contacting candidates for Senate and House.

ATA was formed by a number of professional groups interested in the legislation, including the AMA. The bill would allow the self-employed to defer income taxes on a certain percentage of their earnings if placed in retirement plans.

The blueprint for operations next year was drawn up by a special committee appointed by ATA's executive committee. Active in the work were Doctor William J. Kennard, representing the AMA; Milton F. Lunch, National Society of Professional Engineers; Donald E. Channell, American Bar Association; Lyman Bryan, American Institute of Certified Public Accountants; and Al Payne, National Association of Real Estate Boards. Sending the proposed plan to members of ATA's board, ATA Chairman F. Joseph Donohue wrote:

"The favorable action on the bill in the last session raises our hopes for complete success in the coming session of the Congress. The discussion of this measure on the floor of the House prior to its passage, as well as the later debate on the floor of the Senate before it was ruled 'out of order' was not 'germane' to the bill to which it was sought to be attached by way of amendment by Senator Potter, has pointed to our areas of strength and to our areas of weakness. It is on the latter we hope to concentrate."

Cerebral Palsy Associations Schedule Scientific Session

Each year, as a part of its Annual Meeting, the United Cerebral Palsy Associations hold an Annual Scientific Session for the physicians, medical students and professional workers in related fields who may be concerned with cerebral palsy. This year's Scientific Session will be held Saturday, November 15, 1958, in the ballroom of the Hotel Mayflower, Washington, D. C., from 9:00 a.m. to 5:15 p.m.

The symposium will be entitled "The Problem of Hemiplegia—A Critical Evaluation." Feeling that cerebral palsy is a professional problem of etiology, diagnosis, management and follow-up, the Association has planned this meeting to be of interest to physicians, medical students, nurses, psychologists, occupational therapists, speech therapists, physical therapists, social workers, educators, and rehabilitation counselors.

No registration fee is required. A complete program is available by writing to United Cerebral Palsy, 321 West 44th Street, New York 36, New York.

Kansas Offers Technology Refresher

The Tenth Annual Postgraduate Course in Medical Technology will be offered on January 5, 6 and 7, 1959 at the University of Kansas Medical Center, Kansas City, Kansas. This course offers physicians an opportunity to refresh and improve the knowledge and skills of their "hands" in the laboratory (medical technologists or other laboratory workers) in laboratory medicine. All phases of the field are covered, especially Microbiology, Clinical Chemistry and Urinalysis.

Outstanding guest speakers will discuss cross infections in the hospital, laboratory aids in the diagnosis of endocrine disease, the significance and identification of urinary casts and practical renal function tests. Other subjects to be discussed include practical tests for studying the coagulation mechanism in the laboratory, cholesterol determination and the medical-legal responsibility of laboratory workers. Each registrant will have an opportunity to attend six of the fifteen different Workshops during the three days. In three of these, the registrant will be able to discuss his bacteriology, hematology or blood bank problems with a panel of experts. Other Workshops will be concerned with electrolyte methodology, P. B. I. determination, serological technics, mycology review, serology and medical photography.

The registration fee for the three days is $15.00. The program announcement may be obtained by writing to the Department of Postgraduate Medicine, University of Kansas School of Medicine, Kansas City 12, Kansas.

THE CITATION

MEDICO-LEGAL BRIEFS

Prepared by the Law Department of the American Medical Association

ARTIFICIAL INSEMINATION — In a divorce action in Scotland it was held that the conception of a child as a result of artificial insemination by a donor, without the consent of the husband, did not constitute adultery. But the Court ordered the wife to reveal the time and place of the alleged artificial insemination. When she refused to disclose this, the Court ruled that it had to draw the inference of adultery and accordingly granted the divorce.

Opinions of Lord Wheatley, *In Causa, MacLennan* v. *MacLennan*, Court of Session (Scotland, Jan. 10, 1958 and Feb. 28, 1958)

CARELESS COMMENTS AND RES IPSA LOQUITUR—The plaintiffs, husband and wife, brought a medical professional liability action against a hospital and a physician employed by the hospital. During a sigmoidoscopic examination to determine if the entire rectosigmoid polyp had been removed her intestine was torn. The trial Court entered judgment on defendants' motion for nonsuit at the conclusion of the plaintiff's evidence. On appeal, the California District Court of Appeal held that the plaintiffs were not entitled to have the case submitted to the jury on the doctrine of *res ipsa loquitur* alone. But the Court said that evidence that the defendant physician came out of the operating room and said "Boy, I sure made a mess of things" and that by inserting the sigmoidoscope in the patient's rectum "I busted the intestine," raised a question for the jury as to whether the defendant, in inserting the sigmoidoscope, used the degree of care ordinarily exercised by other doctors of good standing in the community. The judgment of nonsuit for the defendants was reversed.

Wickoff v. *James*, 324 P. 2d 661 (Calif. April 24, 1958)

TAX DECISION—A physician owned two farms. During the years 1937-1955 the operation of both farms resulted in losses which the physician deducted for income tax purposes. The Commissioner determined that the farms were operated by the taxpayer as a hobby and not with the intent to make a profit and, accordingly, he disallowed deduction of the losses for the taxable years 1947-1951. The Tax Court sustained the deductions and held that the evidence substantiated the taxpayer's testimony that he intended to obtain a profit from the farms, and that he had a reasonable expectation of making a profit after a development period of 10 to 15 years even though he was temporarily disappointed by reason of a depression in the cattle business beginning in 1951. The Court said that the farms were not country estates and they were not used to any material extent for entertaining or recreation.

George N. Zeagler v. *Commissioner*, Docket 53410, 55075; May 23, 1958; T.C. Memo. 1958-93; opinion by Judge Kern

NEUROSIS—In a recent decision in a medical professional liability case, the Court of Appeals of New York affirmed a recovery of $15,000 against the defendants, physicians specializing in x-ray therapy, for mental suffering which arose from information the plaintiff received from a dermatologist to whom she had been referred by her attorney for examination. The dermatologist told her that the area of her shoulder which had been burned as a result of the x-ray treatments administered by the defendants should be checked every six months inasmuch as it might become cancerous.

Ferrara v. *Galluchio*, — N.Y.S. 2d — (N.Y. —).

Further information on the preceding cases may be obtained from the Law Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

Coming Meetings

UNIVERSITY OF OKLAHOMA MEDICAL CENTER

POSTGRADUATE PROGRAM*

Oklahoma City, Oklahoma

Individual Postgraduate Courses

ARTHRITIS AND RELATED DISORDERS—Nov. 12, 13, 14, and 15

Second Oklahoma Colloquy on Advances in Medicine. The program will be devoted to Arthritis and related disorders. Twelve nationally prominent investigators in their field will participate and present the results of original work from their laboratories.

ADVANCE ELECTROCARDIOGRAPHY — March 2 through 6

(Prerequisite, Dr. Bayley's Basic Electrocardiography course.)

OBSTETRICAL-GYNECOLOGICAL SYMPOSIUM—March 7

Sponsored by the Oklahoma City Obstetrical and Gynecological Society. There will be two prominent guest lecturers.

OPHTHALMOLOGY-OTOLARYNGOLOGY SYMPOSIUM—March 12 and 13

Sponsored by Oklahoma City Society of Ophthalmology and Otolaryngology.
Guest Lecturers:
Michael J. Hogan, M.D., Ophthalmologist, San Francisco.
Prominent Otolaryngologist to be announced.

ORTHOPEDIC SYMPOSIUM—April 10 and 11

Treatment of Athletic Injuries.
Sponsored by the Regional Committee on Trauma of the American College of Surgeons.

FIFTH ANNUAL COMBINED SURGERY, RADIOLOGY, PATHOLOGY SYMPOSIUM—May 14 and 15

Diagnosis and Treatment of Thyroid Diseases.
Sponsored by the Oklahoma Association of Pathologists, Oklahoma Association of Radiologists and Oklahoma Chapter of American College of Surgeons. Guest participants of national reputation in surgery, radiology and pathology will participate.

OKLAHOMA ASSOCIATION OF HOUSE STAFF PHYSICIANS—May 22

Two guest lecturers and presentation of original papers by members of the various house staffs will highlight this program. Participating hospitals are: Hillcrest Medical Center, Tulsa, St. John's, Tulsa; McBride, Mercy, St. Anthony, University, Veterans Administration, Wesley, Oklahoma City; Central State Hospital, Norman.

SERIAL POSTGRADUATE COURSE

Postgraduate Division

UNIVERSITY OF OKLAHOMA MEDICAL CENTER

Oklahoma City, Oklahoma

1958-1959

Nov. 19—Surgery—Ano-Rectal Lesions and Their Management.

Dec. 10—Medicine—The Selection of Patients for Cardiovascular Surgery.

Jan. 14—Pediatrics—Diagnosis and Management of Heart Disease in Infancy and Childhood.

Feb. 11—Urology Symposium and C. B. Taylor Lectureship. (Guest Lecturer to be Announced.)

Mar. 11—Medicine—Advances in the Diagnosis and Management of Common Allergic Disorders.

April 8—Anesthesiology—Anesthesia for the Part-Time Anesthetist.

May 13 — Pediatrics — Antimicrobial Therapy and Treatment of Infectious Disease in Childhood.

June 10—Surgery—Herniae.

Designed so physicians may attend four hours of formal instruction in the above fields while spending only one-half day from their office, this series is approved for credit by the Oklahoma Academy of General Practice. Time will be 3:30 to 8:30 p.m. on the Second Wednesday of each month, September through June. Registration is $3.00 per session or $25.00 for the entire series.

*Further information may be obtained from the Office of Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th Street, Oklahoma City, Oklahoma.

SECOND OKLAHOMA COLLOQUY ON ADVANCES IN MEDICINE

November 12, 13, 14 and 15, 1958

The Second Oklahoma Colloquy on Advances in Medicine will be held on November 12, 13, 14 and 15. Eleven nationally prominent investigators in their field will participate and present the results of original work from their laboratories.

Registration will be open to all physicians. Further information may be obtained by writing to the Division of Postgraduate Education, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma.

ALPHA OMEGA ALPHA LECTURESHIP

December 14, 1958
8:00 p.m.
University of Oklahoma School of Medicine Auditorium

Guest speaker for the Alpha Omega Alpha Lectureship will be Owen H. Wangensteen, M.D. Additional information may be obtained by writing to Henry Mosley, President of the Oklahoma Chapter of A.O.A., 1108½ Northeast 18th Street, Oklahoma City, Oklahoma.

THE UNIVERSITY OF TEXAS CLINICAL CONFERENCE ON CANCER CHEMOTHERAPY

November 14-15, 1958 **Houston, Texas**

The University of Texas M.D. Anderson Hospital and Tumor Institute and The University of Texas Postgraduate School of Medicine will present the third annual clinical conference on November 14 and 15, 1958 at the Texas Medical Center in Houston.

Eight hours credit will be certified by the American Academy of General Practice for attendance at this conference. An advance $5.00 registrar's fee must accompany the registration for the Academy. Further information and a detailed program may be obtained from the University of Texas Postgraduate School of Medcine, Jesse Jones Library Building, Houston, Texas.

THE UNIVERSITY OF TEXAS POSTGRADUATE SCHOOL OF MEDICINE

Practical Electrocardiography*
December 15-19, 1958 **Houston, Texas**

The University of Texas, Postgraduate School of Medicine announces a course in Practical Electrocardiography to be held in Houston, December 15-19, 1958. The course will emphasize Spacial Vector-Electrocardiography. The J.J. and Una Truitt Lecturer for this course will be Robert F. Grant, M.D., of the National Heart Institute.

Anesthesiology*
February 18, 19, 20, 1959 **Houston, Texas**

The Fourth Annual Course in Anesthesiology to be offered by the University of Texas Postgraduate School of Medicine will be held February 18, 19, 20, 1959 in Houston. The course is designed to review theory and practice of commonly used anesthetic techniques and will include discussions of some of the newer drugs.

*Address all inquiries to: The University of Texas Postgraduate School of Medicine, 410 Jesse Jones Library Building, Houston 25, Texas.

INTERNATIONAL MEDICAL ASSEMBLY of SOUTHWEST TEXAS

January 26, 27, 28, 1959
Gunter Hotel **San Antonio, Texas**

The International Medical Assembly of Southwest Texas will hold its annual meeting January 26, 27, 28, 1959 in San Antonio, Texas at the Gunter Hotel. Further information may be obtained by writing to Mr. S. E. Cockrell, Jr., Executive Secretary, 202 West French Place, San Antonio, Texas.

AMERICAN CANCER SOCIETY ANNUAL SCIENTIFIC SESSION

SYMPOSIUM ON CANCER OF THE COLON AND RECTUM

October 20-21, 1958 **Biltmore Hotel**
New York City

A complete program of the Symposium on Cancer of the Colon and Rectum to be presented at the Annual Scientific Session of the American Cancer Society may be obtained by writing to Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, New York.

7th ANNUAL CANCER SEMINAR

January 22-24, 1958 **Phoenix, Arizona**

The 7th Annual Cancer Seminar of the Arizona Division of the American Cancer Society, will be held January 22-24, 1959 at the Paradise Inn, Phoenix, Arizona. Detailed information is available by writing to Seminar Committee Chairman, Edward H. Bregman, M.D., 543 East McDowell Road, Phoenix, Arizona.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION

November 10-13, 1958 **Cleveland, Ohio**
Statler-Hilton Hotel

The 43rd Annual Scientific Assembly of the Interstate Postgraduate Medical Association will be held in Cleveland, Ohio, November 10-13. Write to Erwin R. Schmidt, M.D., Secretary, Interstate Postgraduate Medical Association of North America, Box 1109, Madison 1, Wisconsin for complete details.

Organization News

Garrison Appointed to U.S. Jaycees Committee

George H. Garrison, M.D., Oklahoma City pediatrician, has been appointed by the American Medical Association to serve on the Community Health Advisory Committee of the United States Junior Chamber of Commerce.

The A.M.A. was asked to appoint three representatives to the committee whose function will be to review and discuss phases of the Jaycees' Community Health Program that are now in existence or that might be proposed in the future.

Included in the over-all committee will be representatives from the American Hospital Association, the American Dental Association and the Association of State and Territorial Health Officers. This is the first time that the Jaycees' have asked the medical profession to assist in planning its Community Health Program.

Doctor Ritzhaupt Is New Senate Dean

Louis H. Ritzhaupt, M.D., will become the new dean of the Oklahoma Senate when the Legislature convenes for its 27th session in January.

The Guthrie physician inherits the title from Jim Rinehart, El Reno, who recently resigned his Senate seat in order to run in the gubernatorial primary.

Doctor Ritzhaupt will be closing out his eleventh term in the Senate. He was first elected for the 14th Session and served continuously until 1952, when he was defeated by Republican Carl Morris. He won the post back in 1956.

Long active in the medical profession as well as state government, he served as president of the Oklahoma State Medical Association during the 1935-36 term.

Medico-Legal Code Drafted

In keeping with the recommendation of the A.M.A.'s House of Delegates at their June meeting in San Francisco, the Oklahoma State Medical Association is now working on a Medico-Legal Interprofessional Code designed to strengthen mutual understanding and improve relationships between the physician-attorney groups in the state. A preliminary code has been drafted by the OSMA's Committee on Medico-Legal Relations which received endorsement from the Council at its September 20 meeting. The proposed code will now be negotiated with representatives of the Oklahoma Bar Association before being referred to the House of Delegates for final ratification.

PROPOSED MEDICO-LEGAL INTERPROFESSIONAL CODE

Whereas, The American Medical Association at its annual meeting held in San Francisco, California, June 1958, adopted a resolution proposed by its Board of Trustees, that an interprofessional code of understanding and cooperation be formulated by the State Medical Associations and County Medical Societies of the United States with corresponding Bar Associations of law, and:

Whereas, our Oklahoma State Medical Association at the request of our President, E. C. Mohler, M.D., has appointed a committee to work with the Bar Association in the preparation of an interprofessional code. The committee individually and jointly has examined the codes of other states, pursued the ramifications reflecting local problems and their solution. We realize that mutual trust, cooperation, and confidence must be exercised by both professions if a code is to be rewarded with success. We therefore, present the following for consideration:

Preamble

The current code of ethics of the medical profession and the canon of ethics of the Bar are hereby adopted by reference as though set out herein. The professions of law and medicine owe a mutual cooperative duty to the courts and the American people. That duty and obligation is better executed when each profession has and exercises respectful understanding and cooperation. Justice is, and must always be our mutual goal, unhampered by ignorance, laziness, incompetence, perjury or self service at the expense of justice.

Basic Considerations

We recognize basic that the ethical code of both professions must be adhered to; that freedom of choice for patient or client applies both to physicians and attorneys. We further recognize that an honest cooperative attitude is needed within each profession for the members thereof and that the greatest element necessary to the succses of this interprofessional code is the exercise of the Golden Rule intraprofessionally by both physicians and attorneys. Emotional instability, egotistic self service, incompetence, flamboyant exhibitionism, dictatorial dominance, wreckless and careless disregard for truth are likewise foreign and inimical to our mutual objective. The oath is a serious solemn vow not to be taken lightly nor handled carelessly. Justice, being our mutual goal, must never be sacrificed to satisfy personal convenience or monetary whims. Every litigant is entitled to his day in court, equal opportunity to present his claim unhampered by personal convenience or financial status. The physician is not a partisan in litigation and is devoid of bias, prejudice and personal interest and that the attorney is the advocate representing his side of litigation to the best of his ability with an object of justice.

Medical Reports

Justice demands that all evidence necessary to establish the merits of litigation be available to the court and jury. The fact that it may be difficult to procure or inconvenient to present is no acceptable excuse for failure to do so. The attorney will prepare authorization and waiver for release of information signed by the patient client and present this to the physician. This request with waiver will specifically designate the information desired. Requests for any and all information you possess etc., will be deemed improper. Where office records, history and physical, diagnosis, treatment, x-rays, electrocardiograms, electroencephalograms, blood, urine, and prognosis are desired the request and/or waiver will so state. The physician on request with waiver duly signed by the patient client will furnish the requested information. A reasonable time will be given for this. Consideration will be given to the convenience and time of the physician. Copies of other medical reports will be made available to the examining physician by the attorney.

Conference

The ends of justice are better served when there is mutuality of understanding between attorney and physician. Conferences at different stages of litigation including pretrial are recommended. Conference between attorney and physician should precede request for reports, subpoena and court testimony. Arrangements for the conference by the attorney should be scheduled to best serve the convenience and conserve the time for both attorney and physician. The attorney will not attempt to influence the physician in any manner concerning examinations reports or the subject matter thereof.

Subpoena

The subpoena is a legal process to compel the attendance at court as a witness. Subpoena duces tecum is a subpoena ordering the witness to bring with him books, documents, office records or other evidence described in the writ. The subpoena is a necessary and indispensable writ of justice. The physician will accept same and comply with its request. A physician may appear as a witness by agreement with the attorney or he must appear in response to a subpoena. The attorney, when he first finds it necessary to have a physician subpoenaed, should contact the physician beforehand telling him of the subpoena and explaining the necessity thereof. The subpoena of a medical witness, expert or otherwise, without notice, conference, understanding and agreement as to compensation, will be considered improper conduct.

Medical Testimony—Expert

In many cases of litigation, especially personal injury, psychiatric and post mortem justice requires the procurement and presentation of expert medical testimony. The Oklahoma State Medical Association will be cooperative in this matter of helping provide for all litigants the availability of expert medical testimony. The primary responsibility for this rests with the attorneys, but should they for any good and sufficient reason be unable to procure same, the Oklahoma State Medical Association will on written request cooperate to secure and furnish the names of qualified experts who will examine the client, make necessary reports and testify if necessary. Proper necessary conference and arrangements will be made by the attorney. In all cases, the convenience of the physician, the time and expense required to adequately perform the duties of the expert, agreement in every particular concerning same must be reached. The medical expert is not an advocate, that being the exclusive role of the attorney, and he will therefore confine his remarks to his knowledge of the medical facts and opinion. Conference between physician and attorney should always be held in litigation requiring medical participation. The physician should be courteous to the cross examiner, and vice versa. The dispatch of justice by the courts cannot be governed by the convenience of litigants, attorneys, witnesses, professional or otherwise. The physician is admonished to use language understandable to the jury avoiding, as much as possible, scientific terms and, where they must be used, explain their meaning in terms understandable to the jury. The attorney should not require the physician to wait around the court house before testifying. In testifying the physician must answer questions as concisely and objectively as possible, avoid bias favoritism or personal interest. The physician should remember that his testimony is not designed to impress or edify, but to explain. Emotional flairs have little or no value in court; they lower the dignity of the proceeding and hinder the cause of justice. The examination of the medical witness should be conducted in a dignified and respectful manner. The relationship of attorney and physician should be founded on mutual

respect, tolerance, courtesy and candor. A physician should not advise on the monetary amount of damages a patient should seek to recover. Where medical testimony or reports are at a wide variance, enough to raise the question of bias, prejudice, incompetence, perjury or ignorance, this will, if thought necessary, be presented to the committee of the whole for proper evaluation and disposition. It is recognized that there can be honest competent difference of opinion. Where possible, written reports will be used in lieu of court appearance. Whenever possible, the physician shall be placed on telephone call to minimize time loss in court. The attorney shall not abuse, badger, browbeat nor humiliate any witness including a physician.

Compensation

Physicians shall never participate nor testify on a contingent fee basis. His fee, nor the amount thereof, shall not be influenced by, nor dependent upon the outcome of litigation. The attorney may, and frequently does, represent his client on a contingent fee basis. A reasonable charge to the patient by the physician may be made for conference, examinations, preparation and rendition of reports, review of office and hospital records and research of authorities, where necessary. If settlement is had at any stage of litigation, the attorney will use his efforts to secure payment of the physician's fee. Primary responsibility for the fee is the patient litigant. The fee shall be in accordance with the prevailing practice in his community for a similiar service. The physician may elect to wait for his fee, reduce it, or cancel it altogether, but it must not be contingent nor subject to fluctuation on the amount of recovery. The attorney will do everything ethical and reasonable to see that the physician is paid for his services and no charge shall be made to the physician for this service. The attorney, in dispensing money on settlement or after judgment, has an obligation to use his efforts to secure payment on the physician's fee. If the client refuses payment, the attorney should notify the physician promptly. The attorney, in a proper case, may advance payment to the physician as a reimbursable expense. At the time of his employment, the attorney may request authorization and assignment of his client for the payment of any and all medical fees in conjunction with the litigation, and that this assignment constitutes a lien on any settlement or judgment. A reasonable expert witness fee is a proper and necessary item of expense in litigation involving medical facts. When an attorney causes a physician to be subpoenaed to appear in any legal proceeding as an expert witness, the attorney will timely appraise the physician of the subpoena before service and shall take action requesting the court, if necessary, to allow compensation for services of an expert witness. In the matter of depositions, conference and agreement will be had by the attorney as to time, place and payment.

Joint Medical Legal Committee

The Medical and Bar Associations of the State of Oklahoma shall each appoint five members from their membership, who shall jointly constitute the committee. It is recommended that, when adopted by each profession, the committee membership terms be staggered from one to five years; that the committee meet quarterly, or as often as circumstance warrants, and that a quorum of the committee shall be three members of each profession; that minutes of the meetings be kept and an annual report made to each profession at its annual meeting; that chairmanship be elective and alternate between the professions. The joint committee shall:

(a) Diligently work for a better and improved relationship between the medical and the legal professions.
(b) Work with the courts to improve the administration of justice.
(c) Cooperate to the end that all litigants will have their day in court, unhampered by financial status, race, creed or religion.
(d) Consider complaints from either profession, attempt to harmonize them and, where circumstances justify, refer same with or without recommendations to the grievance or other appropriate committee or body of one or both professions for consideration.
(e) Promulgate such procedures or suggestions as found necessary to make effective the objectives of the committee.
(f) Report annually to each profession the work of the committee, with any recommendations for improvement.

Enactment

This code of cooperation between the medical and bar associations of the State of Oklahoma shall become effective on adoption by the House of Delegates of the respective professions and signed by the presidents of each.

Approval

The code of cooperation, as set forth herein, has been approved by the committee to draft same by the Oklahoma State Medical Association and is being submitted to the Bar Association of the State of Oklahoma for their considered, cooperative action.

Speaker for A.O.A. Fall Lectureship Announced

Owen H. Wangensteen, M.D., Chief of Surgery at the University of Minnesota School of Medicine and Co-editor of *Surgery* will deliver the fall Alpha Omega Alpha Lectureship to be held at 8:00 p.m., Friday, December 14, 1958, at the University of Oklahoma School of Medicine Auditorium.

Doctor Wangensteen's topic will be "The Peptic Ulcer Problem." All physicians are invited to attend.

John F. Hackler Memorial Scholarship Created

The East Central Oklahoma Medical Society shortly after Doctor Hackler's death on September 3, 1958, created a scholarship in his memory by a resolution:

"Whereas, John F. Hackler, M.D., in his life of public service did fulfill the finest traditions of a true physician and humanitarian, and

"Whereas, this fulfillment was made possible only by personal sacrifice and often by detriment to his own health, and

"Whereas, as a teacher, counselor and enthusiastic participant, Dr. Hackler did actively support the advancement of education at all levels,

"Therefore Be It Resolved:

"1. That the East Central Oklahoma Medical Society does this day establish the John F. Hackler Memorial Scholarship fund.

"2. That the fund shall have as its purpose the perpetuation of the memory of Dr. Hackler and shall serve as a reminder to all who participate of the worthiness of humanitarian ideals which are achieved through sacrifice.

"3. That the fund shall render financial assistance to worthy students and shall be administered by the Society with the assistance of competent legal and financial advisors.

JOHN F. HACKLER, M.D.

"4. That the fund shall have as its source of revenue voluntary contributions made not only by members of society but also by all of Dr. Hackler's friends, both lay and professional."

John Hackler was dedicated to the field of Public Health which he made an integral part of medical and community life. The resolution reflects the respect and admiration his colleagues in medicine had for him.

SYMPOSIUM on the TREATMENT OF LYMPHOMAS and LEUKEMIAS

sponsored by

American Cancer Society, Oklahoma Division

Venetian Room
Skirvin Hotel

9:00 a.m. — 5:00 p.m.
DECEMBER 6, 1958

Oklahoma City,
Oklahoma

Medico-Legal Discussion Held

State medical and legal leaders are seen as they met at the Tulsa Club on October 8, 1958, for preliminary discussions of a projected medical-legal code of cooperation between the Oklahoma State Medical Association and the Oklahoma Bar Association.

Standing, left to right, are. Doctor Francis R. First, Jr., Vice-President, Oklahoma State Medical Association, Checotah; Doctor Hugh Perry, President, Tulsa County Medical Society, Tulsa; Mr. Richard O. Battles, Attorney and District Claims Manager, St. Paul-Mercury Company, Tulsa; Doctor Wilkie D. Hoover, Oklahoma Delegate to the American Medical Association, Tulsa; Doctor James W. Kelley, President-Elect, Tulsa County Medical Society, Tulsa; Mr. Dick Graham, Executive Secretary, Oklahoma State Medical Association, Oklahoma City; Mr. Garrett Logan, President, Oklahoma State Bar Association, Tulsa; Mr. Jack Spears, Executive Secretary, Tulsa County Medical Society, Tulsa; and Doctor John E. McDonald, member of the Legislative Committee of the American Medical Association.

Seated, left to right, are: Judge Harry L. S. Halley, Chief Justice, Oklahoma State Supreme Court, Oklahoma City; Doctor Charles E. Wilbanks, President, Oklahoma Academy of General Practice, Tulsa; Mr. Arthur Coltrin, President-Elect, Oklahoma State Hospital Association, Bartlesville; Dr. Alfred T. Baker, President-Elect, Oklahoma State Medical Association, Durant; Mr. Truman B. Rucker, Attorney, Tulsa; Doctor Marshall O. Hart, Chairman of the Medical-Legal Committee, Oklahoma State Medical Association; Mr. C. Joseph Stetler, Director, Law Department, American Medical Association, Chicago, Illinois; Mr. Robert L. Shepherd, Attorney, Tulsa; Doctor Worth M. Gross, Tulsa; and Judge Lewis C. Johnson, District Judge, Tulsa.

A preliminary draft of a suggested medical-legal code of cooperation was completed last month by Doctor Hart and his Medical-Legal Committee and forwarded to the Oklahoma State Bar Association for review. Similar codes of cooperation were urged by the House of Delegates of the American Medical Association in policy-making actions taken last June at San Francisco. The codes are designed to improve doctor-lawyer relationships.

Chiropractors Oppose "Forced" Immunization

Branding a proposed mandatory immunization ordinance in Tulsa as "Stalinistic," the Oklahoma Chiropractic Physicians Association recently asked the Tulsa City Commission not to adopt it.

Backed by the Tulsa County Medical Society, the City-County Health Department and others, the ordinance would require standard immunizations for children before they could enrol in public or private schools.

The chiropractors said in a letter that " . . . as Americans and as citizens, we compliment any movement making immunizations available for those who desire this form of medication, despite its uncertain and unproven results."

But "compulsion," the letter said, "strikes at the very roots of our heritage, and has the odor and stench of dank and dark recesses behind the Iron Curtain."

The ordinance would not be mandatory for persons objecting on religious grounds, but the chiropractors say this is not enough, that " . . . the religious freedoms of overwhelming majorities are jeopardized."

Under Oklahoma law, chiropractors are not permitted to administer injectables.

Sister Kenny Foundation to Continue Scholarships

The Sister Kenny Foundation announces continuation of its program of post doctoral scholarships to promote work in the field of neuromuscular diseases. These scholarships are designed for scientists at or near the end of their fellowship training in either basic or clinical fields concerned with the broad problem of the neuromuscular diseases.

Each grant will provide a stipend for a five year period at the rate of $5,000 to $7,000 a year depending upon the scholar's qualifications. Candidates from medical school in the United States and Canada are eligible.

Inquiries should be addressed to: E. J Huenekens, M.D., Medical Director, Sister Elizabeth Kenny Foundation, Inc., 2400 Foshay Tower, Minneapolis, Minnesota.

Baker Elected to Crippled Children's Board

OSMA President-Elect Alfred T. Baker, M.D., has been elected to the Board of Directors of the Oklahoma Society of Crippled Children, succeeding the late L. S. Willour, M.D., McAlester.

Announcement of the election of the Durant physician was made at a recent meeting of the Durant Rotary Club by H. Dick Clarke, Executive Secretary of the Society.

Doctor Baker will represent Pittsburg, Latimer, LeFlore, Atoka, Pushmataha, McCurtain, Bryan and Choctaw counties on the board.

Carver Chiropractic College Closed

Oklahoma is now without a Chiropractic college due to the closing of the Carver Chiropractic College in Oklahoma City. Representatives of the profession said the school was closed for economic reasons and explained that the small enrollment would not support the operation.

The students of the Oklahoma school have been transferred to out-of-state colleges with the majority of them going to St. Louis' Logan Chiropractic College where the records of the local school were also sent.

REQUESTS FOR SCIENTIFIC PAPERS and EXHIBITS

53rd Annual Meeting of the Oklahoma State Medical Association

April 20-22, 1959 Mayo Hotel Tulsa, Okla.

A limited number of scientific papers are needed to complete the scientific program of the 1959 Annual Meeting. The title and a short synopsis of the suggested paper should be mailed to Byron W. Steele, Jr., M.D., Chairman, Scientific Works Committee, 325 Utica Square Medical Center, Tulsa, Oklahoma. Final date, **November 30, 1958.**

Members of the OSMA, as well as recognized schools and organizations, are invited to submit exhibits for inclusion in the Scientific Exhibit section at the 1959 Annual Meeting. Write for an application blank and summary of rules and regulations by addressing: Mr. Jack Spears, Executive Secretary, Tulsa County Medical Society, B9 Medical Arts Building, Tulsa, Oklahoma. Completed applications must be returned to the same address not later than **January 1, 1959.**

Seated left to right at the head table are: Robert East, Secretary of the Oklahoma Chapter of the Student AMA; Norma Sneed, Treasurer, Oklahoma Chapter; S. N. Stone, M.D., Associate O.U. Dean of Clinical Instruction; Glenn C. Couch, Ph.D., Dean of the University College, Norman; E. C. Mohler, M.D., President of the OSMA; A. T. Baker, M.D., President-Elect of the OSMA; Herschel L. Douglas, President, Oklahoma Student AMA; Russell F. Staudacher, Executive Secretary, national Student AMA; A. N. Taylor, Ph.D., Associate O.U. Dean of Student affairs; William Kirkham, O.U. Student and Treasurer of the national student organization; Ben H. Nicholson, M.D., Editor-in-Chief of the Journal; and Robert Stobaugh, Vice-President of the local student group.

Two Hundred Attend Student A.M.A. Dinner

Over two hundred were in attendance at the Annual OSMA-sponsored dinner for the members of the Oklahoma Chapter of the Student American Medical Association which was held October 17 at the Petroleum Club, Oklahoma City. In addition to the medical students, the group included officers and councilors of the OSMA as well as preceptors and several special guests.

The annual dinner provides the OSMA with an opportunity to demonstrate its endorsement of the outstanding student organization at the University of Oklahoma School of Medicine and, at the same time, permits physicians and students to become better acquainted on an individual basis.

Principal speaker of the evening was Russell F. Staudacher, Executive Secretary of the Student AMA, Chicago, who discussed the activities of the national student organization.

OSMA President E. C. Mohler, M.D., also addressed the group concerning the value of participation in organized medicine. Herchel L. Douglas, President of the local student organization, responded with an expression of gratitude for the dinner.

Medicare Fees Changed

Many adjustments were made in the Medicare Schedule of Allowances during the renegotiation of the OSMA contract in July. Although the Association has terminated its official responsibility in the program (see October *Journal*), individual physicians may continue to see Medicare patients and submit statements for services rendered.

At the time of the Association's withdrawal from the program, the Medicare Committee had contracted for the printing of a new physician's manual for subsequent distribution to the profession. Drastic changes in the determination of eligibility of Medicare patients and a cutback in the variety of services offered not only caused the termination of the contract but also made the manual obsolete before the printing was completed.

The maximum fees printed below represent changes in the original contract, as of July 1, and are not intended to reflect changes of policy imposed by the Office of Dependents Medical Care on October 1. It is assumed that new eligibility regulations and new policies concerning conditions to be covered will be contained in a new manual to be printed and distributed by an agency other than the Oklahoma State Medical Association.

HOSPITAL VISITS

0012	$12.50
0013	5.00
0014	5.00
0015	4.00
0022	$15.00 (week or % thereof)
0023	40.00
0024	3.00

CONSULTATIONS

0026	15.00
0027	35.00

SPECIAL MEDICAL PROCEDURES

0028	25.00
0029	15.00
0032	20.00
0033	10.00
0035	5.00
0036	7.50

HOME OR OFFICE VISIT

0042	10.00
0043	10.00
0044	5.00
0046	10.00
0047	5.00
0048	7.50
0049	5.00

SPECIAL PROCEDURES FOR ACUTE EMOTIONAL DISORDERS

0061 First Week	$100.00
Subsequent Week	75.00
0062 First Week	75.00
Subsequent Week	60.00

ASSISTANTS

10% of surgical fee; not less than $25.00, but never more than 50% of surgical procedure.

TREATMENT OF MINOR INJURIES

0071	$10.00
0072	5.00
0073	10.00
0074	5.00
0076	15.00
(Area over three inches By Report)	
0077	15.00
0078	10.00
0079	5.00

SPECIAL PROCEDURES FOR REHABILITATION

0081	4.00
0083	4.00
0084	10.00
0085	4.00
0087	5.00
0088	2.00
0090	5.00
0091	3.00
0092	3.00
0094	3.00
0096	3.00
0097	6.00
0098	4.00
0099	3.00

INTEGUMENTARY SYSTEM

*0101	5.00
*0102	5.00
*0108	10.00
*0114	5.00
*0115	5.00
*0125	10.00
*0130	8.00
0131	B. R.
*0140	5.00
*0145	5.00
*0171	8.00
*0180	(Use Mutiple Procedure Formula)
*0190	20.00
*0230	8.00
0231	20.00
0238	100.00
0260	12.00
0261	28.00
0262	60.00
0265	12.00
0266	4.00
0275	60.00
0276	B. R.
*0288	20.00
0289	80.00
0291	40.00
0295	80.00
0296	40.00
0309	80.00
0310	60.00
0311	80.00
0319	80.00
0325	100.00
*0351	10.00
*0352	16.00
*0353	40.00
*0354	8.00
*0355	12.00
*0356	16.00
*0359 (New Code No.)	B. R.
0431	40.00
0441	40.00
0445	65.00
0446	280.00
0447	400.00
0451	100.00
0457	130.00
0470	250.00
*0480	B. R.
*0481	B. R.

MUSCULOSKELETAL SYSTEM

0621	B. R.
0686	25.00
0687	40.00
0688	90.00
0691	25.00
0693	125.00

0694		200.00
0696		25.00
0699		125.00
0701		220.00
0702		400.00
0703		25.00
0704		120.00
0705		200.00
0706		160.00
0720		100.00
0721		130.00
*0761		8.00
*1046		8.00
*1047		6.00
1450		B. R.
*1452		16.00
*1511		8.00
*1517		4.00
1581	(New Code No.) 25% for each additional tendon	
1584	(New Code Co.) 25% for each additional tendon	

RESPIRATORY SYSTEM

*1901		5.00
*1905		10.00
*1911		8.00
*1915		8.00
1916		20.00
1917		60.00
1922		140.00
1928		130.00
1935		40.00
*1941		10.00
1942		40.00
1943		B. R.
R1950		240.00
R1953		150.00
*1965		8.00
*1971		8.00
*1974		10.00
1975		40.00
1978		100.00
1979		100.00
*1981		8.00
1985		60.00
1986		80.00
1988		160.00
1991		110.00
1992		80.00
1993		225.00
1994		280.00
2006		80.00
2013		100.00
2016		140.00
2031		160.00
2032		120.00
2041		225.00
2051		300.00
2054		B. R.
2055		300.00
2057		300.00
2058		100.00
2061		15.00
2063		25.00
2071		45.00
2074		60.00
2077		65.00
2081		80.00
2086		5.00
2087		45.00
2101		80.00
2103		B. R.
2104		B. R.
2111		65.00
2113		70.00
2117		115.00
2120		115.00
2121		70.00
2122		70.00
2123		70.00
2124		45.00
2126		100.00
2127		50.00
2128		5.00
2131		225.00
2132		300.00
2133		375.00
2134		375.00
2135		450.00
2141		135.00
2142		300.00
2144		80.00
2147		325.00
*2183		12.00
*2186		8.00
2194		300.00
*2221		20.00
*2222		8.00

CARDIOVASCULAR SYSTEM

2331		75.00
2353		450.00
2424		B. R.
2431		80.00
2432		120.00
2445		10.00
2446		100.00
Subsequent		50.00
2448		20.00
2449	(New Code No.)	20.00
2454		5.00
2461		5.00
2522		150.00

HEMIC AND LYMPHATIC SYSTEMS

*2631		8.00

DIGESTIVE SYSTEM

*2701		8.00
*2705		28.00
2741		25.00
R2751		B. R.
R2761		B. R.
*2771		8.00
2781		15.00
2791		B. R.
2801		B. R.
*2815		8.00
*2871		8.00
2881		15.00
2883		25.00
2884		100.00
2885		150.00
2886		200.00
2887		12.00
2894		B. R.
2901		B. R.
*2915		20.00
*2961		8.00
2971		25.00
2974		B. R.
2977		15.00
*2982		10.00
2983		40.00
2984		90.00
2986		90.00
2987		180.00
2989		50.00
2990		200.00
2992		60.00
2996		40.00
3000		40.00
3004		40.00
3011		B. R.
3021		50.00
3046		B. R.
*3121		60.00
*3123		60.00
3176		240.00
3181		B. R.
3204		75.00
3261		150.00
*3283		8.00
3321		140.00
3322		15.00
3325		200.00
3331		200.00
3333		200.00
3335		200.00
*3341		8.00
*3392		12.00
3411		5.00
3416		5.00
3417		25.00
*3441		8.00
*3456		12.00
3550	(New Code No.)	350.00
3551	(New Code No.)	450.00
3552	(New Code No.)	400.00
*3611		12.00
*3612		8.00
3734		70.00

URINARY SYSTEM

*3820		12.00
3966		4.50
*3978		20.00
*4031		12.00
*4033		5.00

MALE GENITAL SYSTEM

*4101		12.00
*4111		8.00
4132		360.00

4133	450.00
4161	25.00
*4191	8.00
*4192	5.00
*4211	20.00
4221	15.00
4224	B. R.
4227	B. R.
*4305	10.00

FEMALE GENITAL SYSTEM

4401	28.00
*4303	10.00
*4405	10.00
4411	20.00
*4421	10.00
4423	160.00
4424	120.00
4425	320.00
4427	15.00
4428	30.00
4431	30.00
4433	62.00
4436	40.00
4441	B. R.
4443	80.00
4445	80.00
4447	80.00
4451	20.00
4461	40.00
*4463	15.00
*4471	12.00
4473	200.00
4474	200.00
4476	40.00
4478	40.00
4481	120.00
4482	120.00
4484	100.00
4486	100.00
4488	175.00
4491	175.00
4493	200.00
4494	175.00
4495	175.00
r*4497	160.00
4501	B. R.
4505	B. R.
r*4511	12.00
4521	30.00
r*4541	160.00
4545	180.00
r*4551	180.00
r*4561	160.00
r*4562 (New Code No.)	100.00
4571	120.00
4581	75.00
4583	175.00
4585	175.00
r*4591	175.00
*4611	10.00
4613	225.00
4614	200.00
4617	250.00
4621	200.00
4624	200.00
4627	320.00
4631	250.00
4632	150.00
4634	60.00
4637	60.00
4641	10.00
4642	50.00
4644	50.00
4646	45.00
4647	45.00
4671	80.00
r.*4676	12.00
r.*4677	12.00
4681	175.00
4683	175.00
4685	175.00
4687	175.00
4690	175.00
4692	175.00
4694	175.00
4696	60.00
4701	70.00
4711	20.00
*4713	5.00
*4720	15.00
4731	40.00
4735	150.00
4745	90.00

MATERNITY

4801	175.00
4802	175.00
4803	200.00
4804	175.00
4805	175.00
4807	15.00
(By Report on Difficult Delivery)	
4808	175.00
4809	60.00
4810	75.00
4811	180.00
4815	60.00
4820	75.00
4821 (This fee includes all routine laboratory work performed by the attending physician.)	150.00
4822	85.00
4823	50.00
4824	12.50
4825	12.50
4826	25.00
4827	100.00
4828	25.00
4828 X	15.00
4828 V	10.00
4840	4.00
4851	50.00
4870	40.00
4878	12.00
r*4881	B. R.

NERVOUS SYSTEM

5129	20.00
5143	15.00
5146	15.00
5182	400.00
5253	50.00

EYE

5401	120.00
5402	80.00
5411	125.00
5412	175.00
5413	200.00
5414	240.00
5417	125.00
5418	225.00
*5437	8.00
*5438	15.00
5441	40.00
5443	40.00
*5445	5.00
*5447	10.00
5448	12.00
5451	125.00
5452	175.00
5457	50.00
5461	120.00
*5465	20.00
*5466	20.00
5471	350.00
5472	400.00
5481	90.00
5491	200.00
5492	200.00
5493	120.00
5495	120.00
5496	16.00
5501	320.00
5503	350.00
5504	350.00
5505	175.00
r.5511	60.00
r.5515	60.00
5531	80.00
5532	80.00
5541	200.00
5544	175.00
5546	175.00
5551	120.00
5552	160.00
5553	160.00
5554	120.00
5571	175.00
5601	80.00
5602	40.00
5611	250.00
5616	250.00
5622	200.00
5631	320.00
5632	160.00
5641	200.00
5642	240.00
5643	135.00
5646	90.00
5647	280.00
5651	240.00
5652	240.00

5653	240.00
5662	240.00
5664	300.00
5667	350.00
5668	300.00
5671	40.00
*5691	8.00
*5692	8.00
5697	220.00
5698	220.00
5701	B. R.
5702	25.00
5703	30.00
℞5712	20.00
5721	B. R.
5723	B. R.
5724	B. R.
5725	150.00
5726	200.00
*5728	20.00
*5741	5.00
*5742	8.00
*5743	15.00
*5751	20.00
*5753	20.00
5774	75.00
5775	65.00
5776	35.00
5777	B. R.
5801	40.00
5803	30.00
5804	80.00
5811	200.00
5813	200.00
5815	200.00
*5821	30.00
5833	200.00
*5835	16.00
*5841	8.00
*5843	12.00
*5844	6.00
5845	40.00

EAR

*5901	8.00
*5903	8.00
*5905	8.00
*5911	8.00
5914	25.00
5917	85.00
5922	85.00
5924	250.00
*5931	8.00
5933	25.00
*5961	8.00
5963	20.00
5971	180.00
5975	250.00
*5982	20.00
5983	40.00
5984	90.00
5991	250.00
5995 (New Code No.)	250.00
5996 (New Code No.)	125.00
6001	90.00
6011	350.00
6021	350.00
6031	400.00
6032	250.00
6033	240.00
*6050	10.00
*6052	10.00

RADIOTHERAPY

Deep x-ray per treatment	10.00
Radium or x-ray for primary skin neoplasm (benign or malignant) not to exceed	50.00
Large skin lesion requiring multiple ports	B. R.
Radium for deep tumors, interstitial or intracavetary, course, not to exceed	125.00
Radioisotope	B. R.

PATHOLOGICAL EXAMINATIONS

8611	5.00
8736 (New Code No.)	10.00
8751	B. R.
8919 (New Code No.)	15.00
8956	7.50
8957	12.00

*—Asterisk indicates that fee shown is for surgery only

℞ item—may not be compensable

Have You Heard?

HENRY H. TURNER, M.D., appeared as a member of the faculty for the 10th Annual Postgraduate Assembly of the Endocrine Society which was held at the State University College of Medicine in Syracuse, New York, September 29 to October 3.

Clinical Professor of Medicine at the University of Oklahoma School of Medicine and Chief, Endocrine Clinic, University Hospital, Doctor Turner participated on a panel, the subject of which was Disorders of the Thyroid Gland.

COMANCHE COUNTY MEDICAL SOCIETY will sponsor a Diabetic Detection Drive, November 16 through 22nd. In addition to the drive, the society will sponsor a lay-education program through the local newspapers, radio and TV stations.

RALPH HEINE, M.D., Elk City, was one of seven physicians in the nation to be approved for membership in the American Fracture Association during the group's recent convention in Oklahoma City.

JOE W. MCCAULEY, M.D., has established offices in the Medical Arts Building in McAlester. A graduate of the University of Oklahoma School of Medicine, Doctor McCauley moved from Malden Air Force Base, Malden, Missouri to McAlester.

Ten Oklahoma physicians were inducted as new Fellows of the American College of Surgeons which met in Chicago recently. They are: WILLIAM S. DANDRIDGE, M.D., Muskogee; GILBERT S. CAMPBELL, M.D., MERLIN K. DUVAL, Jr., M.D., EDWARD R. MUNNELL, M.D., BOB J. RUTLEDGE, M.D. of Oklahoma City, ROBERT L. IMLER, Jr., M.D., EMANUEL N. LUBIN, M.D., JOE L. SPANN, M.D., BYRON W. STEELE, Jr., M.D., and C. THOMAS THOMPSON, M.D., of Tulsa.

Auxiliary News

Auxiliary in Action

The 15th Annual Conference for State Presidents and Presidents-Elect, national officers and chairmen, of the Woman's Auxiliary to the American Medical Association was held in Chicago at the Drake Hotel, October 6-8, 1958. Mrs. Iron H. Nelson, Tulsa, president, and Mrs. Clifford Bassett, Cushing, president-elect, represented Oklahoma.

The national auxiliary office staff and the resources of the American Medical Association headquarters staff were used for the conference, which gave new ideas and exchange of methods concerning all phases of the auxiliary program. "Auxiliaries in Action," the theme of the conference, was portrayed by the state presidents who were assigned to panels or took part in skits or discussion programs.

Films available for use in health education were reviewed. "Helping Hands for Julie," a new film, showed the importance of paramedical careers. It may be used by the auxiliary recruitment chariman in every county to interest young people in careers in the field of medicine and health. A mental health film, "Preface to a Life," was shown as an example of the excellent educational material available from American Medical Association. "The Medicine Man," AMA film, shows the fight against quacks in the food and nutrition field.

Dr. Earnest B. Howard, assistant vice-president, addressed the conference with a round-up of AMA news. He closed the final conference session as moderator of a clinic on auxiliary problems. Dr. F. J. L. Blasingame, executive vice president gave a lantern slide lecture of the AMA reorganization plan. Dr. Gunnar Gunderson, AMA president, spoke on the World Medical Association.

We were impressed by the plans for the remodeling of the AMA headuarters building. Two and one-half million dollars will be spent to make it one of the most modern medical buildings in the world.

The four priority projects for 1958-59 are: American Medical Education Foundation, Recruitment for Paramedical Careers, *Today's Health* magazine and Safety. The Safety program was presented with sleight of hand tricks by Mr. Frank Burroughs, jr., Field Service Director, Citizens Traffic Safety Board of Chicago. Legislation was a lively topic with Mr. C. Joseph Stetler and Mr. Warren Whyte, AMA legal staff, as participants and Mrs. Charles L. Goodhand, National Legislative Chairman, as moderator.

The Civil Defense program on Home Emergency Preparedness, Community Plan for Emergency Action, and Protection from Radioactive Fallout, was attended by Mrs. Neil W. Woodward, Oklahoma City, Civil Defense Southern Region Chairman.

Craig-Ottawa Auxiliary Organized

Ten doctors wives met and served a covered dish dinner when the Craig-Ottawa Medical Society had its monthly meeting, September 17, 1958, at the Wendelken home, Miami, Oklahoma. They organized an auxiliary, elected officers and voted to meet at the same time as the county society.

Mrs. Harry C. Ford, Miami, was elected president and Mrs. Wright Shelton, Miami secretary-treasurer. Others in the new group are: Mrs. Glen Cosby, Mrs. John Highland, Mrs. Charles Letcher, Mrs. H. W. Wendelken, Mrs. Rex Graham, Mrs. David Carson, of Miami. Mrs. James M. McMillan and Mrs. Donald Olson, Vinita, have been members at large, but will now be affiliated with the Craig-Ottawa county auxiliary.

Sponsorship of a Future Medical Careers club in the Miami high school is a major project. The aim of the club is to familiarize the students with the courses needed in preparation for paramedical careers, and the opportunities offered.

The Achievements of Aristo

...in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]...absence of serious side effects specifically noted.[1,2,3]

...in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]... 6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]

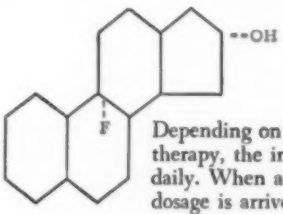
1. Rein, C. R., Fleischmajer, R., and Rosenthal, A. L.: J. A. M. A. *165*:1821, (Dec 7) 1957.
2. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.
3. Sherwood, A., and Cooke, R. A.: Personal Communication.
4. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957.
5. Hartung, E. F.: Personal Communication.
6. Schwartz, E.: Personal Communication.
7. Sherwood, A., and Cooke, R. A.: J. Allergy 28:97, 1957.
8. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Paper presented at Nephrosis Conference, Bethesda, Md., Oct. 26, 1957.
9. Ibid.: Personal Communication.
10. Barach, A. L.: Personal Communication.
11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

tocort®

Triamcinolone LEDERLE

...in Respiratory Allergies: "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

...in Other Conditions: Two failures, 4 partial remissions and 8 cases with complete disappearance of abnormal chemical findings lead to characterization of ARISTOCORT as possibly the most desirable steroid to date in treatment of the nephrotic syndrome.[8,9]... Prompt decrease in the cyanosis and dyspnea of pulmonary emphysema and fibrosis, with marked improvement in patients refractory to prednisone.[10,11,12]... Favorable response reported for 25 of 28 cases of disseminated lupus erythematosus.[13]



Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

Comparative studies of patients changed to ARISTOCORT from prednisone indicate a dosage of ARISTOCORT lower by about ⅓ in rheumatoid arthritis, by ⅓ in allergic rhinitis and bronchial asthma, and by ⅓ to ½ in inflammatory and allergic skin diseases. With ARISTOCORT, no precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

25 YEARS AGO

Articles published in *The Journal* of the Oklahoma State Medical Association November, 1933.

EDITORIAL

RECOMMENDATION FOR RELIEF FOR THE INDIGENT SICK

At the request of Governor Murray a meeting of the Council of the State Medical Association was held at Oklahoma City, October 31, with a representative of the Governor, Mrs. E. McKinnon, State Supervisor. Social Service, under the Federal Emergency Relief Administration, present at the meeting. We were asked to set up a schedule of fees that would be paid by the Federal Emergency Relief Association for the care of the indigent sick in the various counties of the State. The following schedule has been submitted, this schedule to be subject to a 50% reduction:

Visits	$ 3.00
Office visits	2.00
Obstetrics	25.00
Mileage (per mile)	1.00

Fracture Schedule

Skull	$ 50.00
Jaw	25.00
Humerus	50.00
Radius	25.00
Ulna	25.00
Radius and Ulna	35.00
Pelvis	50.00
Femur	75.00
Tibia	35.00
Fibula	20.00
Tibia and Fibula	50.00
Fingers	10.00
Toes	10.00
Clavicle	25.00

X-Ray

Hands and Feet	$ 5.00
Arms and Legs	10.00
Hips	15.00
Shoulders	10.00
Pelvis	15.00
Spine—Ap. and Lat.	25.00
Chest—for ribs	10.00

Operative Fees

Laparotomy	$100.00
Brain Injuries	100.00
Empyema	50.00
Vaginal Drainage	50.00

Amputations

Major	$100.00
Minor	25.00

Anaesthesia

Spinal or General	$ 12.50
Tonsillectomy	25.00

It was further recommended that this service be rendered only to those registered for relief and as long as they remain on the relief rolls. This schedule and arrangements to exist only during the period of the emergency. That the family physician-patient relation be maintained.

When no physician is especially desired the doctors are to be called in rotation from a prepared roster of the members of the component County Medical Societies, using, of course, the most accessible physician in the rural communities.

The above schedule, with 50% reduction, was made with the approval of the Federal Emergency Relief Association representative and will be forwarded immediately to Washington for final approval.

Of course the Council could not pledge the physicians of the State to do work for the above mentioned fees, however, it appears to be the best deal than can be made and we hope that our action will meet with the unanimous endorsement of the profession and that the doctors, as usual, will carry on and do their part to alleviate the suffering of our indigent sick.

EDITORIAL NOTES—PERSONAL AND GENERAL

DR. SAM A. McKEEL, Ada, Councilor Seventh District, Oklahoma State Medical Association, made an official visit to the Seminole County Medical Society in September. He addressed the society on "The Basic Science Medical Law." He was accompanied by Dr. E. A. Canada.

STATE OF OKLAHOMA

EXECUTIVE DEPARTMENT

Proclamation

WHEREAS, the State of Oklahoma will observe its 51st birthday anniversary on November 16, 1958, having made remarkable progress in development of its agriculture, its mineral resources and its industrial potential; and

WHEREAS, it is fitting that one week be set aside not only to pause and reflect upon the great strides Oklahoma has made industrially, but more important, to examine the needs of various communities and areas for even greater development of present industries and those which will flourish in Oklahoma in the future:

NOW, THEREFORE, I, RAYMOND GARY, Governor of the State of Oklahoma, do proclaim the week of November 16 to November 23 to be OKLAHOMA FOR INDUSTRY WEEK and do call upon every loyal citizen of this sovereign state to join in its observance.

FURTHER, do I call upon all Chambers of Commerce, civic and cultural organizations, schools and churches to emphasize during this week the vital role industry has played and is playing in each community;

FURTHERMORE, I deem it exceedingly appropriate that the thousands of industries, large and small, which have prospered in Oklahoma take the occasion of OKLAHOMA FOR INDUSTRY week to open their doors to fellow Oklahomans in open houses, featuring exhibits of Oklahoma-made products, and special educational programs which will portray, in its true light, the importance of ever greater emphasis on industrial development to the end that all Oklahomans will enjoy higher standards of living; that our young citizens will find ample opportunities for a useful career within the borders of our state and that our communities will be forever diligent in creating a physical and spiritual environment--attractive to industry within and without Oklahoma.

In Witness Whereof, *I have hereunto set my hand and caused the Great Seal of the State of Oklahoma to be affixed.*

Done at the Capitol, in the City of Oklahoma City, this 9th *day of* September *, in the Year of Our Lord one thousand nine hundred and* fifty-eight *, and of the State of Oklahoma the* fifty-first year.

Corday Anderson
SECRETARY OF STATE

Raymond Gary
GOVERNOR

PHYSICIAN PLACEMENT

General Practice

Albert Stanley Bailey, Jr., M.D., P.O. Box 1381, Westhampton Beach, L. I., New York, age 28, married, graduated from University of Oklahoma, 1955, presently in military service, will be available May, 1959.

John W. Kennard, M.D., 20 Olson Lane, Fort Rucker, Alabama, age 26, married, graduated from Bowman Gray School of Medicine, 1956, presently in military service, will be available September, 1959.

Robert Emmett Myers, M.D., 872 Ravine Drive, Cleveland 12, Ohio, age 28, married, graduated from University of Arkansas, 1955. Would like to do general practice with emphasis on pediatrics, veteran, will be available September, 1959.

Robert Glenn White, Jr., M.D., 431 Saratoga, San Antonio, Texas, age 26, married, graduated from University of Oklahoma, 1956, presently in military service, will be available August 2, 1959.

John D. Wise, Booneville, Arkansas, age 30, married, graduated from University of Arkansas, 1954, veteran, available immediately.

Gerald C. Zumwalt, M.D., 1701 Avenue P, Del Rio, Texas, age 27, married, graduated from University of Oklahoma, 1956, veteran, will be available July, 1959.

Internal Medicine

Oscar C. Beasley, Jr., M.D., University Hospitals, Iowa City, Iowa, age 30, married, board qualified in internal medicine, graduated from Vanderbilt University School of Medicine, 1952, veteran, will be available July 1, 1959.

William S. Harrison, M.D., 2623 Pittsfield Blvd., Ann Arbor, Michigan, age 31, married, graduated from University of Oklahoma School of Medicine, 1953, veteran, will be available September 1, 1959.

Locum Tenens

Don Allen Mills, M.D., 3911 Burns Place, S.E., Washington, D.C., age 34, married, veteran, graduated from Georgetown University School of Medicine, 1958, wants to do general practice for two years prior to specialized training. Will be available July 1, 1959.

Pediatrics

Prentiss Edwards Findlay, M.D., 1500 Wakefield Place, New Orleans 22, Louisiana, age 29, married, graduated from Emory University, Atlanta, 1954, noneligible for military service, will be available July 15, 1959.

Psychiatry

C. Frank Knox, M.D., 1922 Northwood Apartments, Ann Arbor, Michigan, married, age 32, graduated from Washington University, St. Louis, Missouri, 1954, veteran, now completing a four years psychiatric residency, will be available June, 1959.

Surgery

(Name on Request) 32 years old, married, graduated from Tulane, 1952, veteran, board eligible in surgery.

General Surgery

Clyde William Draughon, M.D., McGuire Hospital, Box 27, Richmond, Virginia, age 35, married, graduated from University of Oklahoma School of Medicine, 1954, veteran, will be available July 1, 1959.

Owen Foster Kline, Jr., M.D., 4712 Warrington Drive, Flint, Michigan, married, graduated from University of Colorado, 1954, not eligible for military service at the present time, will be available July 1, 1959.

Tuberculosis

Helen C. Sharp, M.D., 620½ N. Broadway, Pittsburgh, Kansas, single, graduated from University of Kansas, 1928, prefers to do industrial or student health work and is presntly available.

Deaths

BEN HUNTER COOLEY, M.D.
1895-1958

Ben Hunter Cooley, M.D., 63-year-old former Norman physician, died September 20, 1958 in El Paso, Texas.

Doctor Cooley graduated from the University of Oklahoma School of Medicine in 1921. He practiced in Norman until entering the military service. After World War II, he established his practice in El Paso.

A member of the American Medical Association, Doctor Cooley was a former member of the Oklahoma State Medical Association.

WILLIAM S. CRAWFORD, M.D.
1891-1958

William S. Crawford, M.D., 66-year-old retired Tulsa physician, died October 15, 1958 in Tulsa. A native of Winnsboro, South Carolina, Doctor Crawford received his medical degree in 1914 from the Medical College of South Carolina.

Following his graduation, Doctor Crawford went into general practice for two years before joining the Army Medical Corps. After serving in that capacity for ten years, he came to Tulsa where he became medical director for an oil company.

He was a member of the Southern Medical Association, Oklahoma State Medical Association and the American Medical Association.

SEALS L. WHITELY, M.D.
1920-1958

Seals L. Whitely, M.D., 38 year-old Durant physician, died September 26, 1958. Born in Cedartown, Georgia in 1920, Doctor Whitely graduated from the University of Oklahoma School of Medicine in 1949.

Doctor Whitely has been located in Durant since completing his internship and was secretary of his County Medical Society at the time of his death.

Doctor Whitely was a member of the Oklahoma State Medical Association and the American Medical Association.

CLASSIFIED ADS

OBSTETRICIAN-GYNECOLOGIST WANTED: Excellent opportunity, progressive 3 man group, community 30,000. Well established, complete clinic and hospital facilities. Board qualified. Equity interest without investment after probation. Write Key C, c/o The Journal Oklahoma State Medical Association, P.O. Box 9696, Shartel Station, Oklahoma City, Oklahoma.

ORTHOPEDIC SURGEON, also Pediatrician to head departments. Excellent opportunity. Write Cooper Clinic, Cooper Clinic Building, Fort Smith, Arkansas.

BARGAINS—in medical equipment, new and used. Largest stock of good used medical devices in the Southwest. Reconditioned and guaranteed. We buy, sell, trade, rent, repair. Examining and operating tables beautifully refinished, rechromed, reupholstered. Tell us about your equipment problems. TeX-RaY Co., opposite St. Paul's Hospital, 3305 Bryan Street, Dallas, Texas.

FOR RENT: Professional office space for two or three physicians. Reasonable rent. Plenty of off-the-street parking space. Contact James R. Ricks, M.D., 2312 N.W. 23rd Street, Oklahoma City. JA 5-7438.

SUBURBAN OKLAHOMA CITY OFFICES: New, central heat and air conditioning, NW 39th and MacArthur. Plenty of free parking space, reasonable rent, 200 to 2,000 sq. ft. Frontage. Next to Putnam City School. R.R. 10, Box 616. WH 9-5646.

CLASSIFIED ADVERTISING RATES

Members of the Association or widows of members are entitled to three months complimentary advertisement in this section.

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